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Texting *conscientizaçäo*? A study of immigrant Latina/o adults and mobile learning

A dissertation submitted in satisfaction

of the requirements for the degree Doctor of Philosophy

in Education

by

Karla Cristina Pérez-Mendoza

2014

ABSTRACT OF THE DISSERTATION

Texting *conscientizaçäo*? A study of immigrant Latina/o adults and mobile learning

by

Karla Cristina Pérez-Mendoza

Doctor of Philosophy in Education

University of California, Los Angeles, 2014

Professor Concepción M. Valadez, Co-Chair

Professor Kimberly Gomez, Co-Chair

This cross-sectional case analysis explored the human dimensions in the study of literacy and technology. The study focused on the semi-structured interviews of 15 Latina/o immigrant adults acquiring basic critical literacy skills over a mobile phone. In the interviews, these emergent readers shared their history of participation (Rogers, 2004) in education and in literacy practices. Their narratives of *lived experiences* framed the analysis of mobile learning. In this study, situated affordances referred to the contextualized capacities of new technologies (Gibson, 1979; Gomez, Gomez & Gifford, 2010; Mynatt et al., 1998; Zywica, Richards & Gomez, 2011). Approaching the analysis from the histories and perspectives of the participants rendered a powerful human account about populations typically neglected in the study of education and technology.

In addition, the context-specific afforances narrated by the participants transformed the study of mobile learning by including marginalized perspectives. Lastly, this study documented the impact of mobile learning. Those who completed the mobile learning experience also re-

invented themselves as learners through their narratives. Thus, mobile learning presented an

opportunity for participants to develop literacy while also re-writing their histories as learners.

This study documented the transformative capacities of mobile learning among marginalized

groups. At the same time, the narratives cautioned against the isolation of technology from the

human aspects of learning. In the conclusion, I presented the limitations to mobile learning.

Many of these limitations stemmed from human needs, including the challenges faced by this

population. In addition, the conluding chapter grappled with future design modifications that

capitalize on the affordances of mobile devices for this population of emergent readers. Special

attention was given to the development of critical literacy as found in a Freirean model of adult

education.

The dissertation of Karla Cristina Pérez-Mendoza is approved.

Leisy Abrego

Marjorie Faulstich Orellana

Kimberly Gomez, Co-Chair

Concepción M. Valadez, Co-Chair

University of California, Los Angeles

2014

DEDICATIONS

La gratitud, como ciertas flores, no se da en la altura y mejor reverdece en la tierra buena de los humildes. - José Martí

For my *abuelita* because from her I learned that profound knowledge often dwells in the most humble places. For Francisca Avila and Filemón Pérez because their sacrifices continue to make room for my dreams. For Luis J. Mendoza because his example of infinite love, patience and support nourish my spirit and my work. For Camila Mendoza because she is my source of inspiration. And for God because He has blessed me with them all and with the perseverance to see this work to its completion.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGEMENTS

VITA

Education

Doctor of Philosophy in Education, University of California, Los Angeles   **2014**

Specializations*:* Language & Literacy Development, Digital Technology, Urban Schools.

Master of Arts in Latin American Studies, University of California, San Diego   **2003**

Specializations: Latin American History & Literature, Gender Studies.

Bachelors of Arts in Latin American Studies, Pomona College, Claremont   **1999**

Specializations: Latin American History & Literature, Gender Studies.

Works Published

Peer, K. & **Pérez, K**. (2010). Looking within and beyond: An on-the-ground account of Arizona teachers'

    implementation of the four-hour English language development model. *Issues in Applied*

    Linguistics, 18(2). Retrieved from: http://escholarship.org/uc/item/5pw9w0fv

Martinez-Wenzl, M., **Pérez, K**., Gándara, P. (2012). Is Arizona's approach for educating its ELs superior

    to other forms of instruction? *Teachers College Record*, 114(9), p. 7-18.

Lillie, L.E., Markos, A., Estrella, A., Nguyen, T., Trifiro, A., Arias, B.M., Wiley, T.G., Peer, K., **Pérez, K**.

    (2010). Policy in Practice: The Implementation of Structured English Immersion in Arizona. *Arizona*

    Education Equity Project. UCLA: Civil Rights Project.

Presentations

UNESCO Mobile Learning Week 2013. Paris, France   **2013**

Cell-Ed: Distributing basic literacy to adults via mobile phones.

UCLA Applied Linguistics Annual Public Conference. Los Angeles, California   **2010**

Looking within and beyond: An on-the-ground account of Arizona's implementation of restrictive language

policy.

AERA Annual Meeting. Denver, Colorado 2010

Language and identity: A study of local identity, the classroom, and language among metalhead Latino youth.

Employment History

Project Development and Research

Consultant, Cell-Ed 2011-2013

- Directed and oversaw the research branch of a start-up organization employing mobile technology to distribute native language literacy.

- Managed, hired, and trained personnel for data collection, including the collection of literacy measures and qualitative interviews.

Research Associate, Prof. Marjorie Orellana 2010-2011

- Established relationships with local community center and facilitated in co-construction of a parent-friendly publication about the role of young children as translators.

- Coded qualitative data and assisted in the analysis.

Research Associate, Civil Rights Project 2009-2010

- Reviewed the literature on English Language Learners and best instructional practices.

- Collected observation data in K-6 classrooms to evaluate the 4-hour block in Arizona, the state's instructional approach for English Language Learners.

Teaching experience

Teacher Education Program Instructor, UCLA 2009 to Present

- Assisted in the instruction, observation, and evaluation of novice teachers seeking their Bilingual, Crosscultural, Language, and Academic Development (BCLAD) credential.

- Designed methodology classes for the BCLAD sequence where novice teachers connected theories in language acquisition to every day instructional practices.

- Communicated with program advisors and mentor teachers to guide novice teachers' fulfillment of credential requirements.

CHAPTER 1

STATEMENT OF THE PROBLEM

Study Rationale

> I left my country in order to not be in the midst of ignorance. I arrived in the United States on the 23 of February 1970 at the age of 48. After raising four children I decided to go to school. Because when I was small I could not attend due to the poverty in which I lived. Now I have made a lot of effort to try to improve myself and today I feel much better because I can read and write. Now I feel sure of myself, because when one doesn't know how to read and write one feels as if one doesn't know anything at all, (Valadez & Cajina, 2000).

In "Redefinitions and Identity: Lessons from Critical Basic Literacy Programs," by

Valadez & Cajina (2000), Doña Chona lends her perspective on the need for emergent readers to

develop literacy as transnational citizens. Both around the globe and in the United States

developing basic literacy skills present an eminent goal and challenge in the coming decades

(See *Education for All Global Monitoring Report,* 2006). Around the globe there are a projected

774 million adults of age 15-years and older who lack "the ability to identify, understand,

interpret, create, communicate and compute using printed and written materials associated with

varying contexts," (UNESCO, 2008, p. 25- 34). Justin Baer, John Sabatini, & Sheida White

(2009) reported that in the United States 58% of the least literate adults in the also lived below

the poverty threshold. Of these, Latina/os represented 39% of the 30 million adults in the United

States who performed below basic in the National Assessment of Adult Literacy (Baer, Kutner,

Sabatini, & White, 2009). According to these statistics Latina/o adults are overrepresented

among the least literate adults and this reifies their marginal social standing as Latin American[1]

immigrants.

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[1] While the term Latina/o homogenizes the richness and diversity of these countries and the characteristics of U.S. immigrants, I use the term Latin American, instead of Hispanic, because

1

This study grappled with the development of basic literacy skills among U.S. immigrants Latina/os and investigated the role of mobile learning in meeting these goals and overcoming the challenges for literacy development in the United States. Moreover, the study attempts to build on a tradition of scholarship that privileges the "voice" of participants situated at the margins of societal structures as both authoritative knowledge sources in research and in the generation of theory. Although, qualitative research strives to uncover a multiplicity of realities, often times, these perspectives are relegated to the margins of scholarship. This study of mobile learning among the "least literate" in the United States provides participants a role in the creation of theory around the epistemic affordances of mobile learning[2].

Why mobile learning? The ubiquitous presence of mobile phones in society[3] has ushered a wave of mobile learning instructional programs and research surrounding mobile phones and its educational affordances. In the United States this technological wave continues to reinforce and run the course of the digital divide in education where marginalized groups have less access to these educational resources (Zickuhr & Smith, 2012). This mobile learning initiative was a unique opportunity to circumvent this divide and study the affordances of mobile learning for adults whose needs are typically not met by Adult Basic Education (ABE) in the United States—

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both U.S. and international scholars more commonly use it (See Hayes-Bautista & Chapa, 1987). In this study, participants emigrated from Mexico and Central American countries.
[2] Epistemic affordances refer to the unique knowledge-generating potential of the mobile phone vis-à-vis other mediums.
[3] According the 2011 Cellular Telecommunications and Internet Association's report wireless subscribers in the United States amounted to 331.6 million. This represented a 104.6 % penetration of mobile technology, in other words the ratio of mobile phones to U.S. population. In addition, the Pew Institute reported that 45% of the Latina/o population had access to broadband access at home while 85% reported mobile phone use (Livingston, 2011). Even with the presence of a digital divide among different ethnic and income groups (Livingston, 2011; Zickuhr and Smith, 2012), the number of Latina/o in the United States who have access to mobile technology is outstanding when compared to other forms of technology.

immigrant Latina/o adults whose fundamental educational needs diverge from those deployed in an English only approach to education.

In "Mobile Learning, Digital Literacies, Information Habitus and At-Risk Social Groups," a qualitative study focused on young marginalized adults in a village in Australia and in another village in Vienna, Margit Böck emphasized that "[a] pedagogy of social inclusion aims at engaging learners as social actors on their own ground, as always significant and as experts in their life-worlds," (Böck, 2012, p. 56). Similarly, this study contributes to our understanding of marginalized communities in the United States and their encounters with mobile learning. At the same time, the current work offers a glimpse of Latina/o immigrant adults as "social actors on their own ground." The cross-sectional case study offers a unique glimpse into the multilingual and multicultural literacy practices of Latina/o immigrant adults in the United States. In addition, this study captures the rich experiences of Latina/os immigrant adults—narratives of struggle and resilience. All together, the outcomes of this study furthers current theory on mobile learning and what some consider the epistemic affordances of mobile devices by including those typically at the margins of society and education—as are Latina/o immigrant adults.

Study Design

In May of 2011, Dr. ConcepciónValadez and I were approached by Cell-Ed—an organization with an innovative literacy initiative. Cell-Ed proposed using a mobile device to teach basic adult literacy to adults around the globe. To pilot this literacy initiative, Cell-Ed proposed *Leamos™* as the instructional content for the mobile learning platform. I was employed by the organization to adapt the curriculum, to rollout the mobile platform, and to direct the research study in three sites around Los Angeles. Through the course of my

participation in this exploratory phase I also collected semi-structured interview data, observation notes, and teaching logs from participants enrolled in the mobile phone program.

In this study I used a cross-case qualitative analysis (Yin, 2003) to identify themes relevant and exceptional to the participants' experience of the mobile phone literacy program. The cases were selected through a purposeful sampling. Because this qualitative study focused on the experience of participants, it was imperative to use the most familiar cases. Moreover, Whyte (1984) and other authors suggested that rapport between researcher and participants determined the richness of an interview (As cited in Bogdan & Biklen, 2007, p. 7). Thus, my cases are developed from the experiences of the people with whom I had worked with the longest. These were the participants most familiar to me whose interviews, observations notes, and teaching logs I had recorded myself.

In *Qualitative Research for Education: An Introduction to Theories and Methods*, Robert Bogdan & Sari Biklen (2007) characterized qualitative research as descriptive, inductive, and concerned with meaning-making processes. In other words, qualitative research is primarily concerned with how people make sense of their lives (p. 7). In his work on qualitative research in education, Frederick Erickson (1986) termed this a *participant perspective*. The primary concern of this work is a *participant perspective*, as termed by Erickson (1986). The themes under study included participants' experience with literacy and their perceptions of the affordances and the impact of mobile learning. Also, a constant-comparative method of analysis (Glaser & Strauss, 1967; Strauss & Corbin, 1994) was an essential process in the analysis of the data. This has also been described as an inductive method of data analysis where generalizations are made from the data (Blaikie, 2000, p. 73). Moreover, the theory and the literature on adult education and mobile learning played a role in the exploration of the patterns available in the

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data. However, it was the data that primarily led the analysis in this study. In a similar way, the report of the findings relied primarily on narratives that unfolded in the course of the interviews and elucidated the participants' perspective surrounding the generated themes.

Positionality

In his review of the philosophical paradigms in qualitative research, Creswell (2007) characterizes a social constructivist worldview as one where:

> …individuals seek understanding of the world in which they live and work. They develop subjective meaning of their experience…These meanings are varied and multiple, leading the researcher to look for the complexity of views rather than narrow the meaning into a few categories or ideas," (p.20).

In this study I seek to further our understanding in the field of adult education by exploring the meanings generated in the narratives of emergent readers, specifically Latina/o immigrant adults in the United States. However, as Critical Race Theorists (CRT) who study the Latina/o experience suggest (Pérez Huber et al., 2008; Solorzano & Yasso, 2002; Yasso, 2005), I place the collective experience at the center of my philosophical approach to research. At the same time, I consider my own membership[4] in the Latina/o community as I contribute to the knowledge base of Latina/o's in the United States.

In 2009, my grandmother and I sat in the living room of her home in Boyle Heights, California. We explored the utility of a computer-based literacy program, also part of my graduate research. This home was one she purchased during the seventies with the money she earned as a nanny-in-residence in the San Fernando Valley and, later, sustained with her labor in an onion packaging company in downtown Los Angeles. A single mother of seven children, my grandmother modeled resourcefulness, care, and wisdom. When I began my work with

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[4] Villenas (1996) develops the issue of group membership in her work, *The colonizer/colonized Chicana ethnographer*. In it she underscored her multifaceted positionality as a member of an ethnic/racial group and an outsider to this particular Latina/o community.

Leamos™, I thought about *abuelita* because in all her wisdom she had not developed reading and writing skills beyond printing her name. Thus, I enlisted her in my evaluation of the computer-pair model and, in turn, she continued to nourish me with her *consejos* and anecdotes.

This memory explains part of my personal commitment to this research. In addition, my interactions with *abuelita* fundamentally shaped my humanistic approach to the study of adult literacy. It also shaped my commitment to and interaction with participants. This research investigates an innovative delivery of basic adult literacy in Spanish with the use of mobile technology. It asks: can adults learn basic literacy skills in their primary language with the use of mobile technology and, if so, what are the promises and the limitations of this new delivery of literacy? The unique vantage point of this study is that of the human experience—my own experiences with *abuelita* and those shared by the participants. In underscoring the humanized aspects of literacy development, I hope to establish that people may lead fulfilling lives without conventional literacy practices. However, I also aim to highlight that education and access to conventional literacy are a human right. In addition, *el ser analfabeta* (i.e., the stigma of illiteracy) may weigh heavily on people's identities as learners and as societal actors. Further, the participants in this study wanted to acquire literacy because they had a profound belief that education—particularly literacy—would help transform their sense of self and the conditions of their lives. My personal experience with *abuelita* and the participants fundamentally shaped my commitment and epistemological approach to this study.

Study Contributions

The current cross-sectional case study examined the affordances of a mobile learning[5] literacy program for a population of immigrant adult Latina/os in the United States. The

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[5] Also referred to as mlearning.

participants were emergent readers in their primary language, Spanish, and had limited exposure to compulsory education in their countries of origin. As working class immigrant Latina/os, they represented a marginalized group in the United States with peripheral access to Adult Basic Education and even more remote access to educational opportunities that exploit the affordances of digital technologies[6]. While some work discusses the affordances of mobile learning for K-12 (Garcia, 2012; Murray et al., 2011; Sharpless et al., 2002) and higher education (Cook et al., 2008; Caron et al., 2011; Heinze & Procter, 2012) institutions, this study considers the affordances for Latina/o immigrant adults who as emergent readers in Spanish faced challenges often unexplored in ABE—a mostly English language approach to adult education.

Why is there such neglect in supporting Latina/o immigrant adult emergent readers in a language other than English when 20% (U.S. Census 2010) of the U.S. population is multilingual? Others have argued that there is a language ideology in the United States that structures ABE (ABE) around the *sole* objective of English literacy (Auerbach, 1993). According to the literature, Latina/o immigrants in the United States who wish to develop basic literacy encounter at least two obstacles in their development of basic literacy: 1) limited resources in adult education (Comings & Soricone, 2007) and 2) a language ideology that favors English only instructional programs (Auerbach, 1993; Irvine, 1989; Lippi-Green, 1997; Schmidt, 2007; Wiley, 2005). Thus, although 20% of the population in the United States speaks languages other than English in the home, little is known about adult emergent literacy practices in other languages. While learning English is a compelling goal for U.S. immigrants, developing basic literacy skills suffers when other literacies skills go unexamined and instead are simply confounded with English language acquisition (Wiley, 2005).

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[6] Digital technologies refers "…to an ever-changing complex of technological artifacts and tools" (Selwyn, p. 6).

In *Adult Basic Education in the Age of New Literacies*, Eric Jacobson (2012) discussed the affordances of digital technologies for adults acquiring the "…baseline of skills or content knowledge that all adults are expected to have acquired during compulsory education," (Jacobson, 2012, p. 4). He argued:

> Thus, the concept of new literacies as realized through digital technologies is relevant to adult basic education in two main ways. First, it may help in assessing efforts to expand access to learning (through what Lankshear and Knobel might call new technical stuff'). Second, it may help to uncover new ways of making meaning through `literacy (the 'new ethos stuff').

His evaluation of the array of digital approaches to instruction in ABE in the United States highlighted the ways in which digital technologies may increase adult access to education while also revealing new ways of making meaning. However, much of the work reviewed by Jacobson refers to baseline skills in English literacy. Moreover, his discussion of the digital divide in education emphasizes the physical access to digital technologies. Mark Warschauer, Michele Knobel, and Leeann Stone's (2004) qualitative study extended our understanding of the digital divide. In this study the authors compared access and use of new technologies between low and high socioeconomic status youth in California high schools. They argue that in order to explore technology and equity in schools the focus must move beyond physical access to digital technologies[7]. Moreover, the inequalities lurking behind the proliferation of information and communication technologies (ICT) in schools have many guises—including *how* these technologies are used in schools for learning.

The current study contributes to an understanding of digital technologies in education by incorporating an often overlooked and marginalized group into an emerging theory in mobile learning. In addition, it expects to contribute to studying *how* learners utilize technologies.

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[7] See Monroe (2004) for a more detailed historic account of how the digital divide came to be operationalized as a matter of have and have-nots.

Secondly, the work challenges the narrow definition held of literacy in the United States—
English only literacy. By doing so, the work asks those in ABE to consider the use of digital
technologies to include the diverse linguistic needs of students. Lastly, this work interrogates the
potential in mobile learning for meeting the needs of ABE learners in the United States while
making it clear that we have much to learn from emergent readers. This epistemological position
as a researcher emerges from interaction with the participants and a personal commitment to this
research.

Research Questions

1) How did marginally educated U.S. immigrant Latina/o adults experience a mobile phone
   approach to literacy instruction?

2) What were the educational affordances of mobile phones for U.S. immigrant Latina/os
   with marginal educational opportunities?

3) In this case study, what do the narratives reveal about participants' perceptions of literacy
   development and mobile learning?

REVIEW OF THE LITERATURE

Research Questions

1) How did marginally educated U.S. immigrant Latina/o adults experience a mobile phone approach to literacy instruction?

2) What were the educational affordances of mobile phones for U.S. immigrant Latina/os with marginal educational opportunities?

3) In this case study, what do the narratives reveal about participants' perceptions of literacy development and mobile learning?

The review of the literature begins to explore the direction of the study of literacy in recent years. The analysis was organized by Terrence Wiley's (2005) theoretical orientations to the study of adult literacy, which included the autonomous, the social, and the ideological approaches to understanding literacy. I further advance this analysis by drawing upon empirical studies that focus particularly on marginalized adult learners within each of the theoretical orientations proposed by Wiley (2005). Evident in this review of the literature was a paucity of work as it concerns Latina/o adults, particularly when considering literacy as a multilingual construct. Given the absence of research that addressed Latina/os multilingual literacy practices, I propose a conceptual framework to the study of literacy situated in the experiences of Latina/o immigrant emergent readers.

Secondly, the literature on mobile learning will be outlined to examine the epistemic affordances of mobile learning. Epistemic affordances refer to the unique knowledge-generating potential of the mobile phone as compared to other mediums. I contend that the empirical studies in the area of mobile learning begin to support an emerging theory in mobile learning—specifically as it pertains to epistemic affordances of learning through this medium. However,

those studies are situated in K-12 education and higher education institutions and mostly explore

mobile learning through Smart Devices. Thus, theory begins to emerge around mobile learning,

omitting the "voices" of marginalized communities with less access to the latest technological

innovation.

Lastly, this chapter concludes with the conceptual framework that grounds this study. In

Qualitative inquiry and research design, Creswell (2007) summarized the philosophical

underpinnings of qualitative research. He claimed:

> The research design process in qualitative research begins with philosophical
> assumptions that the inquirers make in deciding to undertake a qualitative study,
> (Creswell, 2007, p.15).

Similarly, the conceptual framework arises from the omissions in the study of marginal

communities in ABE and mobile learning and my own philosophical assumptions—situated in

my experience as a granddaughter of an immigrant Latina emergent reader and in the collective

experiences of the participants in this study.

What is Literacy?

Wiley (2005) summarized three orientations to the study of literacy: the autonomous

(Goody, 1977; Greenfield, 1972; Hidyard and David Olsen, 1978), the social (Heath, 1983;

Street 1993; Barton, 1994; Barton & Hamilton, 1998), and the ideological (Apple, 2000; Giroux,

1997; Street, 1984). In this section, I argue that in adult basic education (ABE), scholars define

literacy both as autonomous skill sets and as embedded in the social functions (See ABE focuses

on functional literacy and the authentic text). In *Understanding adult functional literacy*, Sheida

White (2011) delineated what it meant to be a functionally literate adult in the United States. In

her discussion, White (2011) summarized Daniel A. Wagner's (1998) definition of the

functionally literate:

[an adult who] has acquired the knowledge and skills in reading and writing which enable him to engage effectively in all those activities in which literacy is normally assumed in his culture or group, (as cited in White, 2010).

In this definition, functional literacy encompasses both the discreet skills and the everyday literacy activities that allow adults to effectively engage in their environments. As I discuss Wiley's (2005) theoretical orientations to the study of adult literacy, I focus on recent empirical studies to highlight what each approach enables and inhibits in ABE research. I also shed light on the absence of studies derived from the multilingual urban practices of Latina/o adults in the United States—specifically those of emergent readers.

Autonomous orientation. In his landmark work, *Literacy in theory and practice*, Brian Street (1984) developed the notion of an autonomous orientation to literacy to contest the work of anthropologist John Goody (1977), cognitive psychologists Angela Hidyard and David Olsen (1978), and Patricia Greenfield (1972). In their works, the authors proposed cognitive advantages to the written language vis-à-vis its oral representation. Street (1984) summarized the assertions made in this work as:

…conjectures that members of literate societies have the possibility of developing logical functions, of specializing in the 'truth functions' of language, and of extracting themselves from the embeddedness of everyday social life (Street, 1984, p. 20).

In other words, the autonomous orientation, defined by Street (1984), was the study of literacy as an autonomous, abstract system, with cognitive advantages that privileged Western societies. At the same time, this approach to the study of literacy marked non-Western literacies as different and assumed deficiencies in their cultural practices, in many ways recalling the "great divide" theories in education (Street, 1984, p.29).

Although scholars such as Street (1984) discussed the ethnocentric dangers of explaining literacy from a Western perspective, an autonomous approach to literacy continues to be the most pervasive in decision-making processes and what is defined as rigorous scientific research[8]. For example, the National Reading Panel (2000) defined literacy as a set of skills that included alphabetic (phonemic awareness and phonics), fluency (including oral reading skills), vocabulary, and comprehension skills. In this sense, literacy was defined by its discreet parts and as autonomous from its social environment.

Similarly, of the few mobile learning studies among emergent readers, the study by Aker, Ksoll, and Lybbert (2010) define literacy as a set of measurable skills. In their study, *ABC, 123: The impact of mobile phone literacy on educational outcomes*, the authors conducted an experimental study of the efficacy of using mobile phones to teach numeracy and literacy to adult populations in a Niger village, where 90 percent of the population was classified as non-literate. By defining literacy as a set of skills, Aker et al. (2010) studied the causal relationship between the mobile phone curriculum and educational outcomes. At the end of the study, the authors determined that mobile phones were a low-cost alternative to effectively teaching

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[8] The UNESCO report (2008) challenged the social and ideological orientations to address the "limits of the local" by arriving at definitions of literacy that are generalizable. The authors argued:

> That practical engagement, however, will still need to be rooted in sound theoretical and conceptual understanding if the teaching and studying of literacy are to avoid being simply tokens for other interests. Nevertheless, their 'unfinished business' is the need to analyze and contest what counts as 'literacy' (and numeracy)…

While the other literacy orientations discussed in the sections to follow are useful lenses for analysis, the most ubiquitous and most influential definition of literacy continues to be anchored to a skill-based definition of literacy—which include elements such as phonemic awareness, fluency, and word recognition.

literacy and numeracy to non-literate adults. Although the autonomous model reduces the study

of literacy to a set of discreet skills and presumes neutrality without addressing the ideological

underpinnings discussed by Street (1984), it lends itself to experimental approaches to research.

In addition, global and national figures (Aker et al., 2010; Baer, Sabatini, & White, 2009)

suggest that access to Western literacy, as termed in an autonomous model of literacy, also

represents access to the global market and other Western systems such as healthcare.

Consequently, the autonomous model of literacy not only facilitates positivist research, it

privileges the study of a literacy that continues to be highly desired because of the access it

permits individuals and communities.

For example, In *Redefinitions and Identity: Lessons from critical basic literacy programs*

by Concepción Valadez & Marcos Cajina (2000), the authors utilized the biographical narratives

of emergent Latina/o readers in Los Angeles to exemplify the transformative character of literacy

development (see ideological model of literacy). One of the participants in this critical literacy

curriculum, Doña Chona, also described the importance of access to Western literacy:

> I left my country in order to not be in the midst of ignorance. I arrived in the United
> States on the 23 of February, 1970 at the age of 48. After raising four children I decided
> to go to school. Because when I was small I could not attend due to the poverty in which
> I lived. Now I have made a lot of effort to try to improve myself and today I feel much
> better because I can read and write. Now I feel sure of myself, because when one
> doesn't know how to read and write one feels as if one doesn't know anything at all
> (Valadez & Cajina, 2000).

Doña Chona's account suggests that access to school-based literacy, also Western literacy, was

imperative to transform her sense of self and her material conditions as a transnational citizen.

Thus, while Street (1984) challenged scholars to broaden the definition of literacy to include

literacies[9], the autonomous model of literacy surfaced as increasingly pervasive, specifically in

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[9] See Street (1994) for more on New Literacies Studies.

defining policy (e.g. National Reading Panel and UNESCO) as well as in the minds of emergent

readers.

      Social orientation. According to Wiley (2005), this orientation departs from an

understanding of literacy" as a set of socially organized practices," (p.33).   In *The psychology of*

literacy, Sylvia Scribner and Michael Cole (1981) worked with the Vai people of Western Libya

and determined that literacy *itself* did not usher in cognitive advantages. Instead, the Vai

engineered a unique writing system for their oral language. Replaced by English and Arabic,

this language had lost its social function. As Scribner and Cole (1981) evaluated the abstract

thinking abilities of literate and non-literate Vai people, they found no significant differences

between the two groups. Instead, they surmised that it was formal schooling that marked a

difference among the Vai. They concluded:

> Literacy, is not simply knowing how to read and write a particular script, but
> applying this knowledge for specific purposes in specific contexts of use. The nature
> of these practices, including, of course, their technological aspects, will determine the
> kinds of skills ('consequences') associated with literacy, (Scribner and Cole, 1981, p.
> 236).

Moreover, it was what people did with literacy that prompted differences in psychological

development. These claims marshaled a rupture in the study of literacy from the "cognitive

advantages" to the social functions of literacy. In a social orientation, literacy was defined as

context-dependent and studied by its application to a "specific purposes in specific context use."

This orientation to the study of literacy has been credited with expanding a limited understanding

of literacy to include communities at the margins of Western literacy and the relevance of

schooling practices vis-à-vis the social functions of literacy[10].

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[10] Similarly, in her epic work, *Ways with Words*, Shirley Brice Heath (1983) studied the school-
based literacy practices of mainstream, middle-class families and those of nonmainstream, low-

The term functional literacy in ABE emerged from this tradition. In the US both the National Assessments of Adult Literacy (NAAL) and the National Adult Literacy Survey (NALS) measure functional literacy as prose literacy (e.g. reading a brochure), document literacy (e.g. job application, maps, drug labels), and quantitative literacy (e.g. computation skills; balancing checkbook, calculating tips etc.). These skills reflect some of the social functions of literacy. However, in the United States, literacy has been reduced to the study of English literacy, neglecting the social function of literacy in other languages. At the same time, schooling practices for adults in the United States take into consideration the English language only.

This mismatch between a multilingual social reality and English dominant school-based literacy limits the field of Adult Education in important ways. Street (2001) attributed the low-retention rates of adult education campaigns around the globe to the inconsistencies between literacy practices and the implementation of literacy campaigns. The same may be said about the inconsistencies between English-only classrooms and a multilingual society, and the outcomes for foreign-born adults in Adult Education. Although there is a great desire among foreign-born adults to learn English, Elsa Auerbach (1993) in her work on English as Second Language (ESL) classrooms in the United States, discussed the pedagogical soundness of utilizing adults' L1 to teach English. In this work, Auerbach (1993) underscored both the practical and ideological implications to teaching multilingual adults in ABE.

Ideological orientation. According to Wiley (2005) an ideological orientation to literacy stood in opposition to an autonomous orientation. Further, it extended the notion of literacy as a

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income families. She found that in schools, mainstream middle-class practices were privileged over other practices. This cultural-historical tradition of interpreting literacy brought into question the cultural-behaviorist tradition of viewing literacy as isolated from social practices (Heath, 1983).

social practice by underscoring the ideological dimension to the study of literacy. An ideological orientation interrogated the historically-constructed privilege of Western literacy. In *Literacy in theory and practice*, Street (1984) conducted fieldwork in Iranian villages, where he identified distinct literacy practices. For example, *maktab*, acquired in Koranic schools, served a purpose in religious domains. However, Street (1984) argued that it also facilitated the development of commercial literacy during the oil boom era. Street's (1984) work extended the work of Shirley Heath (1983) by illustrating how literacy practices and its events were situated in distinct domains. These practices had particular uses and consequences in each domain. In addition, literacy practices functioned within a web of power relations. Among literacies, Western literacy had been privileged, specifically in the UNESCO's global literacy campaigns.

In *Reexamining English Only in the ESL classroom*, Auerbach (1993) challenges the field of ABE to incorporate the multilingual literacy practices into the classroom. Citing from a number of projects, Auerbach (1993) presented evidence against English-only in the classroom. The author underscored the *ideological* dimensions of this practice in classrooms that ran counter to sound pedagogy.

> Finally because the issue of language choice is so intimately linked to issues of power the article calls for reconceptualizing the notion of expertise to legitimize the knowledge and experience of nontraditional experts from the communities of learners, (p. 9)

In two of the projects cited (Boston's Haitian Multi-Service Center and Teacher Presente in Cambridge), the author found that multilingual practices, for example teaching literacy in students L1, increased enrollment and reduced the push-out of students from classrooms. As demonstrated by Auerbach (1993), an ideological approach to the study of literacy permitted: 1) the discussion of multiliteracies in a society where English-only is normalized and 2) the separation of sound pedagogy from ideologically charged classroom practices.

As Auerbach (1993) underscored, the research-base to support multilingual pedagogical practices in the United States is more abundant in the study of younger children, yet it generally remains scarce. One of the few exceptions was the study by Valadez and Cajina (2000) in Los Angeles. In this study, the authors explored the beginnings of a multilingual literacy center (Spanish and English) by the name of Centro Latino for Literacy. Through the students' narratives, the authors concluded that beyond acquiring school-based literacy in their L1, the students at Centro Latino for Literacy were redefining their identity as learners. This multilingual educational space challenged the ideological approach refuted in Auerbach's work (1993). Further, in this multilingual space students developed their sense of self as learners, partly because this acceptance of multilingual literacies, as Auerbach argued, legitimized, "…the knowledge and experience of nontraditional experts from the communities of learners," (Auerbach, 1993, p. 9).

In the work of Valadez and Cajina (2000) and in the ideological approach to literacy, a Freirean pedagogy often was privileged in classrooms. According to Freire, *conscientização* "…refer[ed] to learning to perceive social, political, and economic contradictions, and to take action against the oppressive elements of reality," (Freire and Macedo, 1987, p.35). According to Freire, it was through *conscientização* that adults would achieve the highest goal of education, transformation and liberation.[11] In *Literacy: Reading the word and the world* Freire compiled the tenets of critical literacy. Foundational to his work was the claim that, "Reading the world always precedes reading the word, and reading the word implies continually reading the world," (Freire and Macedo, 1987, p. 35). In order to develop the pedagogical practices that allowed for a Freirean approach, a shift had to occur in classrooms that placed students at the center of

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[11] Also referred to as emancipatory literacy (Freire and Macedo, 1987, p.6) or transformative literacy (Rogers, 2008).

knowledge creation. Thus, the pedagogical approaches that most resonated with a critical

approach to instructions were collaborative, participatory, and dialogical (Rogers, 2004, p. 276).

These included elements such as generative words—words that emerged from the world

experience of adults. In addition, problem-posing (Freire, 1973, p. 52) where teacher and adults

encounter each other as knowledge equals and arrive at learning through dialogue.

Other authors extend the theoretical principles of Freire in ABE through their empirical

work. For example, Rebecca Rogers' study (2004), *Storied Selves: A Critical Discourse

Analysis of adult learners' literate lives*, examines the narratives of 15 adults enrolled in ABE

and General Education Degrees in a city in the Midwest. While Rogers (2004) did not address

multilingualism directly, the author exposed the transformative potential of critical literacy. In

this study, she utilized Critical Discourse Analysis to interpret the narratives of the participants

across three domains: experience with school, family and community language and literacy

practices, and involvement with children's education. In her analysis, Rogers (2004) determined

that "literate subjectivities shift across different domains of literate experience," (p.294).

Consequently, the author (2004) urged the field to construct programs of instruction that afforded

students the potential of seeing themselves as successful learners while providing opportunities

of bridging this agency into their communities. Connecting students identity productively to

school-based literacy involves harnessing " the places where adults feel as though they have

abilities, feel good about themselves, and have a sense they can get this done," (p. 296). In other

words, imparting critical literacy in classrooms also had to do with "finding the places" where

adults perceived themselves as efficacious.

Rogers' study (2004) arrived at the core of an ideological and critical approach to the

study of literacy. The author places the experiences of adults in different literacy domains at the

center of her analysis. In many respects, literacy was defined through the narratives of the adults. By positioning adult learners from marginal communities at the center, Roger (2004) disrupted the Western and normative assumptions about literacy.

Conceptual framework: Lived literacy. In this study I propose that in order to forge a path in the study of literacy that enables different "voices" to determine the social utility of literacies, including school-based literacy, classrooms and research should also reflect the linguistic realities of adults—specifically foreign-born adults. In addition, a break from a tradition of Western-centric approaches to the study of literacy and instruction requires that marginalized adults also enter the scholarly conversations (with their own language) as *authoritative* knowledge sources. Lastly, I suggest that a study of literacy must depart from the educational aspirations and possibilities of the adults excluded from dominant literacy practices. These aspirations *may* not be defined by any one of the scholarly orientations to the study of literacy. For example, among immigrant Latina/os in the United States, an educational aspiration may be as practical as acquiring the discreet skills that will afford them access to English literacy, while other adults may aspire to harness their identity as learners while challenging the dominant ideologies. This study sets out to place the literacy aspirations of immigrant Latina/o adults at the center of the study of literacy. How are they *living* literacy? How are they defining literacy in their day-to-day and in different domains? What do they aspire to gain as they embark on a mobile literacy experience? Thus, this study extends the work in the field of literacy study by acknowledging that multiliteracies in the United States matter and by proposing that adults themselves define literacy through their lived experiences.

Mobile Learning and Situated Affordances

Much of the scholarly work in mobile learning discusses its singularities and its continuities in relation to the digital takeoff experienced by society (See Lee & Winzenried, 2009). Mobile phones are the most recent additions to the study of these "repertoires of communication" (Jacobson, 2012) in education. This was prompted by the ubiquity of mobile phones in society among different social groups. Mobile phones are the fastest growing form of technology in society; this is true for *normative* users and marginalized communities (CTIA, 2012; ITU Telecom World, 2009; Livingston, 2011; Zickuhr and Smith, 2012). In addition, for marginalized populations, the mobile phone may be the only regular connection to the Internet (Livingston, 2011; Zickuhr and Smith, 2012) and their claim to a highly digitalized world.

While the study of affordances and mobile learning continues to grow (Cook, Pachler & Bradley, 2008; Hanewald & Ng, 2011; Sharples, 2007; Winters, 2006), pressing challenges should be considered as the field generates theory around mobile theory. In this section, I discuss the tradition in scholarship to generate theory based on assumptions of a normative user while excluding marginal communities, much to the latter's detriment. First, I review the literature as it pertains to marginalized communities, in particular immigrant Latina/o adults. Secondly, I review the literature on mobile learning, focusing on the United States, in order to underscore the emerging claims in the field.

Marginalized communities and technology. The need for contextualized study of innovation and affordances becomes more pressing in the study of marginalized groups. In Margolis' (2008) work, *Stuck in the shallow end: Education, race, and computing*, the author begins her work with a metaphor to compare computer science to the escalated drowning rates among African-American children. Margolis (2008) suggested the explanations to today's

phenomena were entrenched in the history of African-Americans in the United States. In the same way, the racial disparities in the field of computer science had much to do with a historic trajectory of a "belief system that rationalized this lack of access," (p. 2). The history of immigrant Latina/o adults in the United States also sheds light on the belief systems that continue to frame this population as educational "newcomers" and "digital immigrants" (Jacobson, 2012, p.1).

Latina/o immigration to the United States has a long and contentious history. Most recent figures estimated that immigration from Latin America to the United States made up 53% of all immigration to the country, Mexican immigrants accounting for 30% and Central American immigrants for 7% of this figure[12]. The large immigration flow of Mexican and Central American immigrants has been explained by push-pull factors, making immigration an inevitable consequence of economic and political strife in Mexico and Central America combined with the demand for cheap labor in the United States (Cornelius, Martin, & Hollifield, 1994). Despite the logic of the push-pull factors, the history of immigration from Mexico and Central America has been a contentious one, marked by contradictions in U.S. immigration policy that in some instances welcomed (e.g. United States-Mexican Bracero Program) and in other instances restricted the flow of immigration to the United States (e.g. Mexican Repatriation and Immigration Quotas of 1976). In his work, *The Latino Threat: Constructing, immigrants, citizens and the nation*, Chavez (2008) outlined a nationally constructed narrative surrounding Latino immigration, termed the *Latino threat narrative*. The author argued, "Latinos are not like previous immigrant groups, who ultimately become part of the nation," (p.2). Instead, Latina/os

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[12] www.census.gov/acs/www/data_documentation/2009_release

are incorporated into the national imagination as "unwilling or incapable of integrating," becoming an invading force and national threat.

This historically grounded *Latino threat narrative* permeates a national perspective that shapes policy and educational practices. For instance, adult education programs in the United States have focused primarily on aspects of acculturation, including English as a Second Language (ESL) and citizenship classes. In her examination of ESL in adult education, Auerbach (1993) found classroom practices keenly tied to an ideological trend—predominantly those reinforcing the English-only movement. Pedagogical practices that recognized and build on existing language practices were largely ignored in the ESL classes she studied. More generally, in K-12 education Latina/o children and adolescents are constructed against the grain of normative cultures (Gutiérrez, Morales, & Martinez, 2009). In addition, their families have historically been examined with an approach reminiscence of the "culture of poverty" (Lewis, 1966).

More recently, ethnographies (See Moll et al., 1992; Vasquez et al., 1994; Zentella, 1997) in education counter such arguments, by shedding light on "funds of knowledge" (Moll et al., 1992) and "asset-based" (Kretzmann and Mcknight, 1993; Pinkett, 2000) approaches to the study of Latina/o immigrants. I argue that situated affordances in a study of learning and technology are an urgent matter to the study of historically marginalized groups such as Latina/os because they fall outside of what has been constructed as normative. Instead, and as argued by Chavez (2008), Latina/os entered educational systems in a social context where they were constructed as a foreign threat in need of assimilation. Consequently, research should continue to uncover the "funds of knowledge" or the assets found in these communities. Situated affordances, or the study of contextualized capacities of new technologies, permit a re-conceptualizing of immigrant

Latina/os as a national reality rather than a national threat. This re-imagining of Latina/o immigrant includes an unexplored knowledge base, founded in their lived-experiences and tales of perseverance and central components to the study of situated affordances.

Epistemic affordances in mobile learning. Epistemic affordances refer to the emerging theories on the unique capacities of mobile devices and learning. Scholars of digital technologies and learning have posited the existence of epistemic shifts that accompany the adaptation of new technologies in learning (Lankshear & Knobel, 2006). These include: affordances bridging formal and informal instruction (Cook, Pachler, & Bradley, 2008); the collaborative affordances of mobile devices (Hanewald & Ng, 2011; Mobile Learning Week, 2013), and the affordances that foster learner-centered approaches (Sharples et al., 2002). The argument in the literature is that these epistemic affordances potentially shift the way in which users/learners construct knowledge. However, many of the referenced studies in the search of epistemic affordances were conducted with K-12 students or in university settings.

As examples, Cook, Pachler, & Bradley (2008) emphasized mobile learning as a potential bridge between formal and informal learning. This study took place in a university setting and involved the participation of university students using high-end phones. Students used a mobile phone to gather data such as video and photos from outside events and related these to formal assessments. They also used a Lifeblog and a mediaBoard to organize, construct, and make explicit the connections between outside events and formal learning. The authors explored the affective issues experienced by students with diverse attachments to their mobile device[13]. This study of informal and formal learning via a mobile phone demonstrated the affordance of a mobile phone for a university population using "smart" technology.

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[13] They also used the term technocentricity to refer to students' proclivity towards technology and its connection to their identities.

Other examples of the affordances of mobile learning currently in the literature include collaborative opportunities and a learner-centered approach to learning. Cook, Pachler, & Bradley (2008) underscored this collaboration in their study of the mediaBoard used to share students' collaborative understanding of formal and informal learning environments. Sharples, Corlett, and Westmancott (2002) extended this discussion to children and their use of Personal Digital Assistants (PDAs) in activities of learning and communication. In addition to a communicative affordance, they posited a learner-centered affordance where, "Learning is a continual conversation with the external world and its artifacts, with oneself, and also with other learners and teachers," (p. 225). The collaborative and learner-center capacities of the mobile device were also highlighted at the second annual UNESCO Mobile Learning Week (2013), where the unique communicative, individualized, and mobile features of mobile devices were crucial to the learner's co-construction of knowledge.

However, in the cited studies, the focus was on children and university students with access to "smart" technology. There was no mention of the particular cultural experience that shaped children or university students' interaction with "smart" technology. Thus, while the studies in this emerging field shape theory on mobile learning, the generalizations are being constructed on the basis of "culturally neutral" studies. These studies mention the importance of both learner and place in generating knowledge, yet forget to situate the study in any particular cultural practice. Moreover, marginalized adult populations, such as adults in ABE in the United States, do not appear in the studies of mobile learning.

In conclusion, the studies in the field of mobile learning demonstrate a theory-building impetus where scholars search for the defining characteristics of mobile learning, its epistemic affordances and its unique capacities. Nonetheless, few examples are found in the study of

marginalized communities and adult mobile learning (Aker, Ksoll, & Lybbert, 2010; Metha et al., 2011). The exceptional studies (Aker, Ksoll, & Lybbert, 2010; Metha et al., 2011) took place mostly in rural settings within developing countries. None addressed the specificity of transnational marginalized communities in urban cities within developed countries. In this study, I propose that the conversation of epistemic affordances must include more of the situated affordances perceived by understudied marginalized groups such as immigrant Latina/os. Otherwise, current theory building efforts in mobile learning run the risk of the all too common exclusion of marginalized groups by positioning themselves as culturally neutral. This understanding of epistemic affordances framed the analysis. In the next section I define the importance of situated affordances to this analysis and to advancing the study of epistemic affordances.

Conceptual framework: Situated affordances of mobile learning. As the field of mobile learning expands scholars begin to search for the generalizable affordances of mobile phone technology. In the study of mobile learning, authors have explored affordances that bridge formal and informal learning (Cook, Pachler, & Bradley, 2008), the collaborative affordances of mobile devices (Hanewald & Ng, 2011; Mobile Learning Week, 2013), and the affordances that foster a learner-centered approach to learning (Sharples et al., 2002). According to these studies, there are unique mobile phone features that facilitate these affordances. These features include: the mobile phone's SMS format of communication, its ubiquitous and portable characteristics, and the communicative aspects of the device. However, I contend that generalizable affordances and any theory surrounding mobile learning should fundamentally include studies with marginalized communities—in particular adults without access to formal education. For the purposes of this study, I explore situated affordances as a term that permits

26

for a study of people, place, and the use of technology. This ethnographic perspective of the study of technology renders a more inclusive understanding of theory surrounding the phenomena of mobile learning.

In *Network communities: Something old, something new, something borrowed* Elizabeth Mynatt, Vicki O'Day, Annette Adler, and Mizuko Ito (1998), studied the network communities as a genre of communication—using as examples four network systems. The authors advanced the study of technology as a *technosocial* construct that require understanding from both a social and technology standpoint. Affordances in their work consisted of "…constant reformulations of social practice and technology use in these communities due to change and learning," (p.126)[14]. Thus, the authors observed that networks were communities sustained by ever changing historical and social relations. Myatt et al. (1998) brought ethnography to the forefront in the study of technology because affordances were defined in relation to those who participated in an environment and their perceptions of that environment. This recommendation underscored the importance of context and participants' perceptions when designing learning environments mediated by technology.

In *Affordances of a scaffolded-social learning network*, Jolene Zywica, Kimberly Richards, & Kim Gomez (2011) focused on the participatory culture of the students and mentors using Remix World, a scaffolded-social learning network that provided students both formal and informal learning opportunities. The authors studied the participatory culture through online observations and interviews of mentors and students. Zywica et al. (2011) concluded from their analysis:

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[14] Also see Gibson (1979) for a discussion on the *perceived* capacities of learning environments. Gibson's (1979) work on ecological affordances to define affordances as, "…what an environment offers—relative to the person or group perceiving or recognizing that quality of the environment" (p.130).

First, no matter how well developed a site is, if it is not integrated in day-to-day curricular planning and goals, effective classroom use is unlikely. Remix World's design allowed it to be flexible with respect to content, level and type of use, and instructional uses. The design flexibility also leaves open multiple forms of participatory culture and participatory practices, (p.40).

In *Teachers and machines: The classroom use of technology since 1920*, Larry Cuban (1986) raised historic challenges to the adaptation of technology in education. The findings in Zywica et al. (2011) also emphasized Cuban's (1986) critique of the historic presence of technology in the classroom. In many instances, technology in the classroom had been poorly integrated because a top-down approach to implementation failed to consider more contextualized aspects of the environment such as teachers and day-to-day curriculum planning.

According to Cuban (1986), integration without *flexibility* proved to be fatal to the uptake of technology in classrooms. The study of Remix World provided a current example of a different approach to the integration of technology that relied primarily on context-specific design and modifications. Furthermore, the study of participatory culture through on-line observations emerged as a valuable method to the study of learning environments and technology, specifically to its successful integration. Finally, the interviews conducted allowed the authors to anchor the affordances as they pertained to the students' perceptions and their use of Remix World. The affordances that surfaced within a specific context and from the perception of the users of the learning environment will be termed situated affordances.

Conceptual Framework Summarized

Federico[15], a participant in this study, utilized his craftsmanship with tile work to help elaborate the portrait of *La Virgen de Guadalupe* found on Olvera Street. This extraordinary

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[15] Pseudonyms will be used protect the identity of the participants in this study.

28

example of an *illiterate* Latino immigrant's contribution to the history of Los Angeles, underscored the tangible skill sets and the talents of these citizens. Moreover, an examination of the lived-experiences of Latina/o immigrants also forge the possibilities of a new narrative based on the contributions of a people and the untapped assets they leave outside of the classroom doors.

In exploring technology from a stance of lived literacies and situated affordances, researchers may generate unexpected findings that uncover alternative narratives to those found in the national imagination. In addition, research studies may also better inform the design of technology and learning for a population generally ignored in the field of education. These design recommendations would be grounded in the situated affordances and lived-experiences of adults on the margins of education and technology innovation. Furthermore, such an approach to the study of mobile learning and literacy may also expand the definition boundaries of literacy to include the contradictions experienced by individuals. In all, this approach to the study of mobile learning and literacy pushes against the traditional view of the *analfabeta*—or the illiterate. Instead, I concede that there is much the field can learn from immigrant Latina/o adults faced with the stigma of illiteracy.

CHAPTER 3

METHODOLOGY

This study was conducted in collaboration with Cell-Ed and Centro Latino for Literacy.

Cell-Ed was a non-profit organization piloting the dissemination of ABE curriculum around the

globe by using the SMS (Short Message Service) function of the mobile phone[16]. The first

attempt was piloted in Los Angeles in collaboration with Centro Latino for Literacy—an

organization with a focus on immigrant Latina/o adults and literacy. The adapted curriculum had

been created by Centro Latino for Literacy and was a computerized curriculum by the name of

Leamos™. This basic literacy program was intended for Latina/o immigrant adults in the United

States and employed a critical literacy approach to instruction (Valadez & Cajina, 2000). At the

time, I was employed by Cell-Ed to help with the adaptation of the curriculum and to execute the

pilot study in three different sites around Los Angeles. Throughout the course of my

participation in this exploratory phase, I collected semi-structured interview data, observation

notes, and teaching logs from participants enrolled in the mobile phone program in order to

address the questions posed in this study.

In this study, I used a cross-case qualitative analysis (Yin, 2003) to identify themes

surrounding participants' experience with a mobile phone literacy program. Fifteen cases were

selected through a purposeful sampling in order to analyze the cases for participants' experience

with literacy and mobile phone learning. Because of familiarity, I selected the cases of

participants I had worked with for the longest period of time and students whose interviews,

observations notes, and teaching logs I had recorded myself. In the following sections I will

describe the design of the case study, including: research question, research design, and data

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[16] See: http://www.celled.org

analysis. In addition, I will provide descriptive information about the participants and the research sites. The inductive and constant-comparative method of analysis (Glaser & Strauss, 1967; Strauss & Corbin, 1994) will be discussed in order to make evident the analysis across cases. Moreover, I hope to highlight the centrality of participants' experience and perspectives to the study of mobile learning. The narratives provided by fifteen participants guided the analysis and framed the findings chapters.

Questions

This study of experience and perception of mobile phone literacy keenly focused on the narratives found in participants' interviews. First, the study sought to address how marginally schooled immigrant Latina/o adults in Los Angles experienced a mobile phone approach to literacy instruction. This study of mobile literacy acknowledged that literacy was inextricably tied to the macro and micro sociohistoric experience of the participants. Both Rogers (2004) and Gregorio Hernández-Zamora (2010) approached the study of literacy from participants' experience. In *Decolonizing literacy: Mexican lives in the era of global capitalism*, Hernández-Zamora (2010) focused his attention on the macro sociohistoric experiences of the transnational adults he interviewed on both sides of the U.S.-Mexico borders. Rogers (2004) argued that every adult in her study possessed, what she termed, a history of participation or a micro sociohistoric experience with literacy. In this study, the micro experiences, or the history of participation, will be privileged over the macro sociohistoric experience found in Hernández-Zamora (2010) to underscore the role of participants as *social actors*. I acknowledge that sociohistoric forces found in Hernández-Zamora (2010) have shaped experiences. For example, some of the macro factors that fuel immigration include economic policy. However, in this study I am interested in

31

the micro histories of participants, or the day-to-day events and experiences informing their roles as social actors.

Secondly, this study attempted to recognize the educational affordances of mobile phones for immigrant Latina/o adults seeking basic literacy skills in their native language. Studies of mobile learning with K-12 and university populations (Sharpless, 2006; Hanewald & Ng, 2011) have proposed epistemic affordances. Nonetheless, this study suggested that affordances should be situated within the context of the user/learner to have relevance, specifically for marginalized populations. Mynatt et al. (1998) explored affordances as "…new methods for forming and defining the environmental capabilities relative to those who recognize it," (p. 130). Moreover, this study focused on affordances as perceived by participants within their experience of literacy and learning.

Finally, this study considered what participants perceived they gained from their interaction with mobile learning and literacy. In Valadez & Cajina (2000), the authors illustrated a significant shift of participants' self-perceptions and Rogers (2004) noted a re-conceptualizing of students as literate selves. The analysis of the interviews and other data sources also explored the shifts in perceptions and the impact of mobile learning to the participants' sense of self to answer: In what ways did mobile learning impact how participants perceived themselves?

Study Design

This study was a cross-case analysis (Yin, 2003) of fifteen participants' experience with literacy and mobile learning. The fifteen participants (See Table 3.1) were selected among the students through purposeful sampling. Because life experience was crucial to understanding participants' perceived history of participation (Rogers, 2004) with literacy and mobile learning, the researcher's proximity to the participants was the main inclusion criterion. The selected

32

participants were interviewed, observed, and assisted in their use of the mobile literacy platform mainly by the researcher. Also, these participants had the longest period of participation in the exploratory research study. As argued by Creswell (2007), a case study approach facilitated a more in-depth understanding of the intricacies of life experience while including a comparison across cases for a more general understanding of experience, affordances, and impact, in this particular context and as perceived by participants. In addition, this approach was instrumental to capturing multiple data sources for a more in-depth analysis of perception and contextual conditions across sources (Yin, 2003, p.13). Although the main data sources were the semi-structured interviews and the narratives provided by participants, other data sources either corroborated, presented contradictions, or illuminated points to be clarified in the semi-structured interviews. For example, from the observation logs I was able gather information about participants' weekly experience with the mobile learning. At the exit interview, the participants who completed the program volunteered only the positive experiences they had with mobile learning. At that moment, I was able to use the weekly observation log to remind them about the difficulties they had reported during their initial participation and encouraged them to discuss them. The sections that follow describe the mobile platform, the settings, the participants, and the data analysis of the study.

Cell-Ed

Cell-Ed was a pilot program that adopted a Spanish basic literacy curriculum to a mobile phone. This literacy program was intended for Latina/o immigrant adults in the United States who did not have basic literacy in their native language. The adopted curriculum was an already utilized program called *Leamos™*. This was a computer-based program consisting of 43 lessons—corresponding to the sounds and the blending of letters in the Spanish language. In

addition, the curriculum was founded on Freirean principles. For example, each lesson utilized a

generative word or sentence situated in the immediate context of Latina/o immigrant living in the

United States. The generative words or sentences found in these lessons either portrayed the

struggles of this population or provided empowering messages. In Cell-Ed, these 43

computerized lessons were divided into 437 micro-modules, each delivered via a text message.

Participants called a number and interacted with the audio-recorded lessons and a platform that

delivered text messages with each of the lessons. Figure 1 provides a glimpse of the platform

and its micro-modules.

Figure 3.1 Cell-Ed Platform

Description of Settings

Participants were recruited from three main sites in Los Angeles County. This cross-case analysis represented two of those sites: Puerto Bello Community Center and Amigo Outreach[17]. These sites provided a host of services for the immigrant Latina/o population (e.g. education, healthcare, and legal services). The site descriptions that follow were based on initial observation notes.

Puerto Bello. As one leaves the hustle and bustle of downtown Los Angeles, a quiet residency complex is found nestled within a low-income housing development established in 2003. Puerto Bello was the resource center for the residents and surrounding communities. Inside the bright-yellow building, murals reflecting the rich heritage of this population adorn these walls. Once in the building, community members were greeted by a friendly and supportive receptionist. On one side of the building was a large classroom space where the ESL classes were held, along with afterschool activities for the children in the community, including a bi-literacy youth program I taught the summer of 2011. On the other side of the building there was a narrow hallway with administrative offices and a multipurpose room. At the end of a hall was a large open meeting room with windows spanning from the ceiling to the floor so that plenty of light illuminated the small library and the corner offices. All interviews with participants were conducted in a small office found in the main meeting room.

Amigos Outreach. Located in mid-city Los-Angeles, this resource center was established by Central American refugees in order to assist new immigrants with the relocation process. Their mission stated: "The mission of *Amigos Outreach* is to empower Central Americans by defending human and civil rights, working for social and economic justice and

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[17] Pseudonyms were used for all sites.

promoting cultural diversity." The brick facade blended well with the urban landscape that surrounds it. Inside the building there was a health clinic, a multipurpose rooms, and the administrative offices. In the same way as Puerto Bello, this center provided health, legal and educational services for Latina/o adults and children. These hallways were decorated with colorful painting displaying the heritage of the community and the talent of the youth. I worked with Amigos Outreach as a volunteer in their citizenship drives. The interviews were conducted in a private office on the third floor of the building where other educational programs took place.

Gaining access. These resource centers were selected because they served immigrant Latina/o communities and because they did not have a Spanish literacy program in place. In addition, I had worked with these centers as an educator and volunteer. My prior work in these communities facilitated my entry into the sites and a cooperative fieldwork experience. Bogdan & Biklen (2007) describe this experience as one where the research becomes a natural part of the setting (p. 98). In Puerto Bello, I had taught a summer literacy program and had established a rapport with the center director and the staff. When I approached the director, she enthusiastically welcomed me back to the resource center. Because they interacted with the community on a regular basis (e.g. signing them up and disseminating information about the programming), the staff had insights into the literacy abilities of some of their members. Although I used flyers and held information sessions at the site, the staff played a key role as informants in the recruitment process. At Amigos Outreach, the personal connection to the director and staff was not as evident. However, I felt at ease as a researcher because I knew the center from my volunteer experience. In addition, my work with the immigrant Latina/o

community over the years and my background as a Latina[18] helped me establish a rapport with the center's gatekeepers (Bogdan & Biklen, 2007, p. 272). Because Amigos Outreach was a much larger provider than Pueblo Bello, the staff was not as available to provide support in the recruitment process. Instead, Amigos Outreach gave the research team permission to post flyers and to hold information meetings on site.

Participants

The participants for this study were recruited from three different sites. From the seventy participants enrolled in the Cell-Ed mobile literacy program, fifteen were selected for this study based on the researcher's familiarity with the participants and the longevity of interaction with the researcher (4 to 8 month period). All participants resided in Los Angeles County and were Latina/o immigrants from mostly rural areas in Mexico and Central America. They expressed a need for literacy development in Spanish, the native language of most participants, with the exception of Pepe, whose first language was Q'anjob'al, a Mayan language. Women were overrepresented among the fifteen participants. Lastly, it is important to note that 5 out of the 15 participants withdrew early from the mobile literacy program. This attrition rate was explained, in part, by personal circumstances, such as health issues. In addition, these participants differed from the other participants who persisted because they did not feel effectively supported in their learning goals by their support networks and/or they did not have family in the United States. The rate of program completion of this case study was near 70%, near that of the exploratory study[19].

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[18] See Villenas (1996) for a discussion on the strengths and limitations of the "native" ethnographer.
[19] See Ksoll, Aker, Miller, Pérez, & Smalley (2014) for a full report on the exploratory study.

Recruitment. Participants were recruited through flyers and information sessions held at each of the resource centers. In both the flyers and the sessions, I was cautious to use respectful language that would not trigger feelings of inadequacy in participants. For example, I refrained from using words such as *analfabeta,* or illiterate, because of its negative connotations. Instead the research team described participants for this study as those in the development of literacy or those who did not have the opportunity to attend school. *La vergünza*, or shame, was a major obstacle in the recruitment process. Participants did not necessarily want to identify themselves as needing basic literacy skills, especially not in a group setting. The research team made itself available after each of the sessions for one-on-one conversations. In addition, flyers with contact information were distributed at the information sessions. Community members and the staff were by far the most effective elements in the recruitment process. They would disseminate the information to potential participants and encouraged them to participate. Also, they helped the research team identify potential participants during an information session. Once identified, I would approach the potential participants to initiate an informal conversation. I waited for them to identify themselves as interested candidates for participation. If they did not, I assumed they were not interested in participation. Respecting participants' privacy was a key element in establishing trust and rapport among the participants.

Establishing a rapport. In their discussion of cooperative style fieldwork, Bogdan and Biklen (2007) cautioned:

> Getting permission to conduct the study involves more than getting an official blessing. It involves laying the groundwork for good rapport with those with whom you will be spending time, so they will accept you and what you are doing (p.85).

As explained earlier, the respectful recruitment of participants was fundamental in establishing trust and rapport with participants. Once a candidate expressed interest in the mobile literacy

program, in person or over the phone, I attempted to establish the same respectful tone during the initial interview. The meetings with participants were all one-on-one and were conducted in a private space. As part of the interview protocol (see Appendix A), I made sure to invite them to skip any question that made them feel uncomfortable. During this time I tried to steer away from language that could be interpreted as judgmental. Instead, I included in the interview protocol words of encouragement and support.

After the interview, I taught participants to use the mobile learning program either on a loaned mobile phone or on their own mobile phone. At times relatives came along for the training portion of the meeting. I sat and practiced with them until I felt confident they could do the lessons on their own. This took anywhere from half an hour to an hour. After our initial meeting, I called participants once a week to check on their progress. They also called me for help with the mobile device and/or literacy questions. At first phone calls were frequent on behalf of the participants, but became less so with time, after they had developed the skills to use the program at home with their family and friends. The weekly check-in calls helped me maintain the respectful rapport with participants. These calls took place for the duration of their participation, anywhere from 4 to 8 months. I tried to be consistent on the day and hour I scheduled the weekly calls. In many cases participants expected my phone call and made time for it. I began each conversation by inquiring about their week and/or by continuing a topic of conversation from the previous week. I then proceeded to ask about their experience with mobile learning for that week. Did they encounter any challenges? Did they learn anything new about literacy or the mobile device? Trying to maintain my role as a listener, participants would deviate from the topics pertinent to mobile learning and would start conversations about the day's events. It was a challenge to strike a balance between "being friendly and warm while

remaining reflective and instrumental," (Bogdan and Biklen, 2007, p. 102). I began timing my

phone calls so that they were no longer than 20 minutes in length. Most participants were eager

to talk about their day and their experience with mobile learning. However, some participants

did not like talking over the phone so their comments were shorter and others were so busy that

they could only talk on the phone as they juggled multiple tasks such as cooking dinner and

taking care of children.

Table 3.1 *Demographics*

Name	Sex	Age	Years in US	Work	Child in US schools	Grandchild In US schools
Marcia	F	33	6	Housekeeper	Y	N
Isabel	F	34	12	Garment worker/Housekeeper	Y	N
Nachita	F	39	10	School Volunteer	Y	N
Anita	F	44	16	Residential Housekeeper	N	Y
Beto	M	46	24	Carpenter/Day Laborer	N	N
Ramíra	F	51	12	Street Vendor	N	Y
Marisol	F	56	38	Housekeeper/Childcare	N	N
Jovita	F	57	-	-	Y	Y
Horacio	M	59	43	Welder/Construction Worker	Y	Y
Mariela	F	61	17	Shoe Repair/Garment Worker/Childcare	N	Y
Federico	M	63	10	Independent Construction worker	Y	Y
Pepé	M	65	9	Field Worker/Factory Worker	N	Y
Beatriz	F	72	29	Caregiver for elderly patients	N	Y
Rogelio	M	49	5	Day laborer	N	N
Esperanza	F	32	5	Cook at a Fast Food Restaurant	Y	N

Data Analysis

This cross-case study described the experience of immigrant Latina/o adults with school-

based literacy and mobile learning. Specifically, I analyzed for participants' histories of

participation with literacy, their perception of affordances as they interacted with mobile

40

learning, and the impact of school-based literacy instruction on the lives of these adults. An inductive method of analysis across cases was employed to "produce generalizations from the data," (Blaikie, 2000, p. 73). In an inductive method, the analysis begins with the data. In this study, the experiential narratives found in participants' interviews were the focus of the analysis. Initial coding attempts were organized around three categories: participants' lived experiences with literacy, perceived affordances, and participants' perceptions of the impact of school-based literacy. The goal was to define these categories from the point of view of the participants. Thus, while the literature guided the analysis, these categories were redefined according to participants' experiences and perceptions. The re-formulation of analytic patterns or themes followed Strauss & Glaser's (1967) constant-comparison method or an ongoing process of data evaluation where the data underwent a cycle of constant comparison, coding, and re-coding (See Figure 3.1). After the themes in the data were established using the constant-comparison method (Strauss & Glaser, 1967), the observation notes and the teaching logs were incorporated into the analysis to further elucidate each of the categories either by providing confirming evidence and/or examples of disconfirming evidence.

Lastly, the goal of the analysis was to provide a "thick" description (Geertz, 1973) of the histories of participation of immigrant Latina/o adults in literacy practices and mobile learning and the perceived impact of their participation in educational practices. In order to capture this "thick" description, the findings were organized according to the themes in participants' narratives. These narratives exemplified and, in some cases, provided exceptional evidence to patterns established in the data. The narrative style was most appropriate as I sought to privilege participants' perceptions in this study in order to make visible the *invisibilities of everyday life* (Erickson, 1986, p.121) for this marginalized population.

41

Table 3.2 *Initial coding based on literature themes*

Questions	Data Sources	Themes in Literature
1. Experience	30 semi-structured interviews*	**History of Participation:** Rogers (2004); Literacy trajectory, constrains and availability, and life skills and competence (Hernández Zamora, 2010)
2. Situated Affordances	30 semi-structured interviews	**Situated Affordances:** "…new methods for forming and defining the environmental capabilities relative to those who recognize it, " (In Mynatt, et al., 1998, p.130) **Epistemic Affordances of Mobile Learning**: Cook, Pachler, & Bradley (2008); Hanewald & Ng (2011); Sharpless (2006)
3. Perceived Impact	30 semi-structured interviews	**Impact:** Barton (1994); Freire & Macedo (1987); Hernández Zamora, (2010); Rockwell, (1995); Valadez & Cajina, (2000)

* An initial and exit semi-structured interview was conducted with each of the 15 participants for a total of 30 semi-structured interviews.

Data Sources

In the following section I provide a brief description of the data sources used in the analysis. These included semi-structured interviews, also referred to as initial and exit interviews, observations notes, and a teaching log. The interviews were captured in audio files and transcribed in their original Spanish language. The observation notes and the teaching log were compiled in two separate notebooks, identifying participants by inverted initials and

42

numeric codes to protect student identity. The audio files were password protected in a personal computer and notebooks were securely stored in the researcher's home. Lastly, I had access to the larger database used for the exploratory study. Occasionally, I corroborated information using this database.

Initial interview. The initial interview (see Appendix 1) was a semi-structured interview conducted prior to participation in the mobile literacy program. Dr. Concepción Valadez, Professor of education at UCLA, drafted an interview questionnaire in her assessment of *LEAMOS™*. This interview questionnaire was modified for the purposes of this study. The most notable modifications were questions regarding experience with mobile phones. I understood that in order for the measure to be reliable, I first had to gain the trust of the participants who had been ridiculed many times in formal educational settings. To illustrate, in one of the interviews conducted a participant explained that she worked arduously to not let people know that she could not read or write. She noted that when people found out she felt their gaze upon her as if she were *un bicho raro*, or a rare species. Because participants felt a social stigma when it came to education and literacy, it was important to establish a respectful and intimate interview setting. The questions were designed to be open-ended—allowing some flexibility and a narrative of events.

Exit interview. The exit questionnaire (see Appendix 2), also a semi-structured interview with open-ended questions, focused primarily on participants' perception of the mobile literacy affordances. In addition, it asked participants to evaluate their application of mobile learning to their day-to-day activities. Lastly, a set of questions addressed change in self-perception after completing the mobile literacy program. What did students gain from this learning experience? This was also an opportunity to clarify aspects of the initial interview and

information captured in the observation notes and teaching logs. The participants who withdrew early (before completing 10 lessons of the 43) were approached with a modified exit interview that included questions to address the reasons for their withdrawal.

Observation notes. Every week, I contacted participants to check-in, collect data, and support their learning. I asked them close-ended and open-ended questions from a calling protocol. During these calls I asked questions about challenges they may have encountered. In addition to talking about the challenges with mobile learning, participants often engaged in conversations about the week's events and personal challenges. This information was stored in the observation notes. Also, these notes included information collected during phone calls from the participants and observations of them using the mobile learning program.

Teaching log. In this log I kept a record of each time I assisted students over the phone or in person. The log outlined the conversations, which included the difficulty the student encountered and how it was resolved. When conditions allowed, I recorded some of these exchanges in the form of audio files. The teaching phone calls were informed by a database that captured participants' learning activity. In other words, the database captured text messages sent by participants to the mobile learning database. This information helped me guide them in their learning when they reached out for help.

The Narratives

Michael W. Apple (2000) discussed the centrality of language to recent work in education. According to this argument, language sheds light on the ways in which "power, identity, and social relations are negotiated, and are contested towards political end," (p.130). Moreover, language embodies a terrain marked by the historical, social, political struggles and inequalities when placed within an analysis critical of the overarching social frameworks of

44

schools. For example, the word *analfabeta*, meaning illiterate in Spanish, has been historically

and socially constructed as a marker of cultural depravations (Apple, 2000, p.3). For many of

the participants, this linguistic marker found a central place in their narratives. Moreover, the

language in the narratives illuminated the everyday working of these macro sociohistoric forces.

The main concern of this work was to shed light on the language used by the participants to

discuss these macro forces while maintaining participants' roles as social actors who reified

and/or undermined historic processes. Thus, the macro processes (e.g. transnationalism,

neoliberalism, push and pull factors of immigration) were discussed as they appeared in

participants' narratives. The narrative was privileged in the findings because it allowed for

participants to construct their own subjectivity while acknowledging that larger sociohistoric

forces were only part of their story.   Thus, the narrative allowed for the macro sociohistoric

factors to be understood and recorded as ongoing and uncertain projects (Holland & Lave, 2009,

p. 4) and a partial component of participants' narratives.

As noted by Rogers (2004) in her work on storied selves, narratives provided participants

with an opportunity to grapple with the construction of their subjectivity. In her discussion

Rogers (2004) cites the work of Luttrell (1997) on working class women:

> Insofar as women's stories are about the events and conditions in their lives, their stories
>
> are also a part of their self-understanding (as cited in Rogers, 2004, p. 8)

Otherwise said, through narratives participants organized, represented, and constituted their

reality (Bruner, 1991, p. 5) for a particular communicative event and audience. I recognize that

"…narrators can construct different identities, depending on the need and the objective of the

communicative event," (Bauman, 2000, p.4). In these particular interviews, the narrators

constructed their stories for a researcher and educator—both an insider and an outsider. My

identity played a role in shaping these narratives. In addition, these narratives have been

organized to exemplify patterns across cases. Thus, they are not purely conversational. Instead,

they have been framed for the purpose of this research. The narrative form was the privileged

source to underscore participants' experiences and perceptions of mobile learning. However, in

this section I highlight that it was not a purely neutral form.

Positionality

> Yo era muy tonta para eso [el aprender a leer]. Me la pasaba atrás de las otras niñas
> peinándolas pa que no me viera la maestra. Yo me escondía[20].

I trace the beginnings of this research to a personal interest—teaching my own

grandmother how to read and learning more about her limited experience with formal education.

Maria Casillas has since passed away, but I initiated my participation with *LEAMOS™* as a

graduate student in an evaluation project in 2009 with the hopes of teaching and learning more

about my grandmother. Her passing in January of 2010 stirred many emotions in my

professional life. I felt compelled to write about her and immortalize her in a more dynamic

form than the all too simplistic statistical profile of women in her situation who migrate from

rural areas in underdeveloped countries to the United States in hopes of finding survival and

opportunity for their children. I wanted to add to this profile the wealth of knowledge she left

behind in every story of struggle and perseverance. In addition, I was left with a great desire to

underscore that although she would be counted among the non-literate population, she would not

be remembered as "ignorant" nor part of a "global epidemic." Instead, the experiences and

stories she left behind enrich my personal and professional understanding in very powerful ways.

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[20] I was too much of a fool for that [learning to read]. I spend my time behind the other girls
combing their hair so that the teacher wouldn't see me. I use to hide.

At the same time I do not want to romanticize the fact that she was deprived of some basic human rights and that her struggles were in large measure a product of living in poverty. I do not want to ignore that perception of her intelligence may have been distorted by, what Apple (2000) referred to as, official knowledge. I especially do not want to overlook that the pervasiveness of this perspective had a profound impact on her self-perception. From an outsiders' perspective I saw in her as a courageous woman who with great dignity had provided for and raised seven children in a new country and under conditions of poverty. I looked at her with great admiration, but as I sat in her living room, introducing her to *LEAMOS* ™, she described herself as a fool, *una tonta*, who was incapable of learning. It may have been the symptoms from the cancer latent in her or her past experience with formal education or the social stigma attached to being illiterate, but she soon decided not to continue with her lessons. My hopes as a grandchild, educator, and research were to enable her to see the courageous and intelligent woman I saw when I looked at her.

The consequences of participating in this project are likely to be varying and complex. For this project, I am guided by a personal and central contradiction in the competing debates about literacy. Venezky (1991) and other authors noted the great impact that Western literacy had on Western society. One noted example was the development of a market economy. The participants in this study, also greatly valued Western literacy because it was a dominant discourse they felt excluded from and because not having access to this discourse stigmatized them in powerful ways. In education, we struggle with competing definitions of what constitutes knowledge and intelligence (Apple, 2000; Hirsh, 2006). While we know that certain "ways of knowing" (Heath, 1983) and certain knowledge sources have more clout than others, a challenge remains. How do we redefine these hierarchies without depriving students of an education that

will allow them to gain access to more powerful discourses? This debate about literacy and knowledge touches me in a profound manner. It is not a debate I can be entirely dispassionate about and this will be reflected in my research.

Frederick Erickson (1986) proposed that as researchers we always bring with us "experience frames of interpretation" (p. 140) to the field. While my experience may bring much strength to my research such as a personal understanding, empathy, and respect, I also recognize the limitations of my positionality vis-à-vis my research. I have a partial understanding of a life without Western literacy practices. I am increasingly part of a debate and discourse about literacy removed from the *realness* of *abuelita's* livingroom. My greatest challenge will be to incorporate my partial understanding of my grandmother while analyzing the data as a newcomer to others' experience with literacy. Many of the narratives captured in the interviews remind me of the conversations I had with my grandmother about literacy, while others differ fundamentally. My goal as a researcher was to uncover the strengths and the limitations of my positionality and to be cognizant about how they may affect my research. I used my observation journal to also include reflections on this topic. This was my attempt at being aware and observing my own positionality during this work.

CHAPTER 4

LATINA/O IMMIGRANT ADULTS' DEFINITION OF A TRANSNATIONAL LIVED LITERACY

Introduction

This chapter sets the stage for the discussion of participants' experience with mobile learning. It asks: What were participants' perceptions of literacy before they engaged in mobile learning? How did they construct a notion of literate selves (Rogers, 2004) prior to mobile learning? What did they define as their educational aspirations in their transnational urban setting? Table 4.1 summarizes the educational background of the 15 participants and some of the reasons they reported for exiting early childhood education and subsequently, in some cases, adult education. Evident from Table 4.1 was participants' limited engagement with schools. Together they averaged less than a year of school participation and most had never completed a year of formal education. Participants initiated mobile learning with a unique transnational experience with education and literacy.

The term lived literacy referred to these context-specific experiences with education and literacy practices. In addition, the term captured the tensions between every day literacy (Barton, 1994) and scholarly definitions of literacy. More importantly, the term lived literacy was an analytical framework that privileged participants' definitions and experience with literacy. In other words, this framework permitted a definition of literacy that emerged from patterns found in participants' narratives about literacy. Moreover, a definition of lived literacy also grappled with participants' shared transnational history of participation in formal education and literacy practices in an urban setting. Lastly, participants' multimodal *ways of reading the world* or the life skill sets acquired over a lifespan also factored into participants' narratives about literacy.

49

Thus, this shared overview of literacy among the participants sets the stage for the study of

mobile learning.

Table 4.1 *Education background*

Participant	Grade Completed	Reasons	Adult School	Reasons
Marcia	0	Poverty, parents & work	US-1 yr.	Depression
Isabel	0	Abusive Teacher	US-1 yr. (ESL)	Classes were cancelled due to funding
Nachita	0	Poverty, work & cared for siblings	0	Depression, Volunteering Commitments
Anita	0	Poverty, work & childbearing	MX- 1yr. (ABE)	Pregnancy
Beto	1	Poverty, stepfather, work	US-Days (ESL)	Work
Ramíra	0	Poverty, work, and parents	0	Work
Marisol	4	Work & abuse at home	0	Helped her mom/work
Jovita	0	Work	US-Weeks (ESL)	Currently in Attendance
Horacio	0	Poverty, stepfather & work	US-Months (ESL)	Car problems, Class did not meet his needs, Work
Mariela	0	Parents	US- 1 yr. (Bilingual Program)	Work
Federico	0	Poverty, stepfather & work	0	Work
Pepe	1	Work & mother's death	0	Work
Beatriz	0	Poverty, parents & work	0	Work
Rogelio	0	Poverty & preferred to help his dad at work	US-Few days (ESL)	Homeless & Work
Esperanza	0	Poverty, parents, & work	0	Work

Lived Literacy: Everyday Theories of Literacy

In his work, David Barton (1994) proposed a dialogical exchange between theory and everyday theories of literacies. His claim was that scholarly theories of literacy seeped into the everyday conversations about literacy and that, to a more limited extent, I argue, people's conversation about literacy informed scholarly work. In the sections that follow I attempt to capture a *lived* definition of literacy—one that privileges participants' perceptions about and experience with education and literacy. Notably, for these participants literacy was a socially meaningful construct informed by the "activity of ordinary life," (Barton, 1994, p.5). Immigrant Latina/o's instantiated their participation in literacy practices in order "to meet specific needs in a new setting," (Reese, 2002, p.51). In *Parental strategies in constrasting cultural settings: Families in México and El Norte*, Leslie Reese (2002) used a comparative case-study method to interrogate the cultural values of Mexican families on both sides of the boarder. Through her analysis, Reese (2002) underscored the dynamic nature of cultural practices—specifically of transnational communites whose practices shift as they cross borders. As in Reese's (2002) study, participants in this study redefined their perception of literacy and their literacy practices as they established themselves in a new setting. Across cases, literacy was discussed most saliently as a vehicle towards *ser alguien*, or being someone; more efficacious interdependent participation in their familial structures; and combating *la vergüenza*, or the shame associated with *el analfabetismo*.

Ser alguien. Anita argued, "Yo quería ir a la escuela porque quería superarme o ser alguien.[21]" In the interviews participants shared a conviction that literacy would further develop their sense of *el ser alguien*, or being someone. In her work Guadalupe Valdez (1996) explored

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[21] I wanted to go to school because I wanted to better myself or wanted to be someone (Transcribed in its original form).

51

some of the cultural values Mexican immigrant parents' exhibited towards education when it came to their children. She underscored that while parents held education in high esteem and encouraged their children with *consejos*, or advice, *educación* extended beyond the formal or academic realm. Instead, parents extended the definition of education to a moral dimension, or *ser bien educado*, where *respeto*, or respect, was highly valued by adults. Similarly, the adults in this study expressed a need to further develop literacy because they wanted to develop an aspect of self not sufficiently addressed in childhood—a schooled self. However, they understood literacy as one dimension of *educación*.

For example, Pepe talked about the educational aspirations he held for his grandchildren in his interview. He underscored that what mattered to him was that they be well and work well[22]. In his discussion about *educación*, Pepe highlighted humility as another moral value. Pepe noted, "Lo único es querernos, es querernos hacer humilde…porque a veces el orgullo mata.[23]" While Pepe and his colleagues enrolled in the mobile learning program because they sought to develop an academic dimension of *educación* not available to them in their childhood, they also honored the moral dimensions of *educación* throughout their interviews.

In the context of Mexico and Central America the academic dimensions of *educación* in participants' childhood, when available, represented a trade-off: going to school or gaining work experience while contributing to the economic sustainability of the family (See Rockwell, 2005; Ibarrola, 2007). Although primary and secondary education is mandatory in Mexico and Central America, the completion rates differed drastically from those in the United States. For example, a recent UNESCO study reported that in Mexico 20% of the population did not complete a primary education and 30% did not complete secondary education. In Guatemala, almost 50% of

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[22] "…que estén bien y trabajen bien."
[23] The only thing is to want, to want to be humble because pride can kill us.

the population did not complete a primary education and more than 50% of the population did not complete a secondary education[24] (UNESCO, 2006). These figures were explained by limitations in resources, but also the fact that in-school *educación* did not guarantee social mobility in what Valdez (1996) described as societies with rigid social hierarchies. However, the participants in the present study sought to develop their academic literate selves once in the United States because they perceived it as a means of *superación*, or social development.

Thus, their positionality as transnational citizens allowed them to re-evaluated school-based literacy within the terms of a new geographical setting and within the social values attributed to school-based literacy in the United States. However, evident in their narratives, was still the more expansive definition of *educación* found in Valdez' (1996) work with immigrant families. Moreover, *el ser alguien* for these adults was also about human dignity. Many of them wanted to learn how to read and write so that they could complete functional tasks such as writing a letter to a relative and/or filling out medical forms. Yet, embedded in these functional tasks were sentiments of human dignity. For example, Anita reported feeling humiliated when she had to admit to others that she did not know how to read and write in order to get the support she needed to complete a literacy task, specifically when in the presence of strangers. Thus, the moral dimensions found in Valdez' study of *educación* among Latina/o immigrants, in this study also extended to a sense of self-dignity. *El ser alguien* for this population of Latina/o immigrant adults also held a dimension of feeling human and dignified.

Interdependence. In the interviews, the participants also expressed a frustration with the dependence they experienced due to their inability to fill out official documents, write letters to

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[24] UNESCO Institute of Statistics, EFA Global Monitoring Report 2006, statistical annex.

loved ones in their home country, and read passages at bible study. Beto provided an example of such frustration:

> El no poder escribir algo que yo quiero me frustra. Me causa frustración y tristeza porque miro que realmente sin uno saber leer; sin nada, es como un ser muerto que no tuviera vida. Yo así me siento, esa *impotencia* que me da…[25]

Research exploring the cultural values of immigrant Latina/os found famialism to be a consistent and core value among this population (Auerbach, 2006; Suarez-Orozco & Suarez-Orozco, 1993; Valdez, 1996; Zentella, 1997). In these studies the interdependence in the family unit appeared as a recurring characteristic of famialism. Auerbach (2006) explained this characteristic as one that elucidated the immigrant frame of reference (Suarez-Orozco & Suarez-Orozco, 1993) where "the drive to achieve is embedded in the wish to nurture one's relatives," (p.278). Similarly, Valdez (1996) provided an explanation for the primacy of the family unit when exploring academic success among Latina/o immigrant families. She explored the interdependence of the family as one of the "making it" strategies that immigrant Latina/os relied upon. The families she studied used "the resources and strengths of the entire family in special ways," (p.177). According to Selby et al. (1990), the survival of the families living in conditions of inequalities and with few opportunities, depended on the contributions of the household to meet their daily needs (In Valdez, 1996, p. 177-178).

Despite participants' desire to develop literacy to execute literacy-dependent activities, the interviews, observation notes, and teaching logs exemplified the famialism and interdependence that characterized immigrant Latina/os. For example, all participants reported relying primarily on a family member to help them with literacy tasks and with the mobile learning program, with

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[25] Not being able to write what I want frustrates me. It causes frustration and sadness because I see that really, without knowing how to read; without anything, it is like a dead being who has no life. That is how I feel, that *impotence* that I feel…

the exception of Jovita, who exited the program early. In addition, many of the over-the-phone teaching conversations recorded in the teaching log involved a family member. In return, the participants contributed to their household with income, chores, and childcare. However, for the participants the stigma associated with *el analfabetismo*, or illiteracy, produced a shame. In Beto's words, it produced *una impotencia* that diminished their ability to see themselves as fully productive and interdependent members of the household and, by extension, society. The participants sought literacy development to further their sense of self in and outside of the home. Aside from self-reliance, the participants wanted to develop their literacy skills so that they could help children and grandchildren with schoolwork and help others in their community. Ramíra recalled fond memories of a short-lived experience in primary education and tied it back to why she wanted to develop literacy through the mobile literacy program:

> [La maestra] me platicaba, me dicía que, que me gustaba hacer, que me gustaría hacer cuando estaba grande y yo siempre le decía que quería ser doctora. Me gustaba ayudar. Y hasta ahorita ya estoy grande y me gusta saber, así, de cosas, ayudar a la gente[26].

Thus, the adults in the study sought to develop literacy skills to integrate themselves to their household and society with a stronger sense of self that would allow them to more effectively help themselves and others.

La vergüenza. In one of her interviews Isabel told a story about being shamed in a parent meeting by another parent when it came time to reading aloud. This parent would tell the group not to let her read because she was a *bartola*—or a mentally slow person. Isabel reported doing reading practices at home so that when she arrived to the parent meetings she was able to read with some fluency. Her husband, in an effort to make her feel better, would tell her, " Ya no eres

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[26] [The teacher] talked to me. She asked me what, what I liked to do, what I would like to do when I grew up and I always told her that I wanted to be a doctor. I liked to help. And to this day—now I am older—I like to know, like, things, about things to help others.

tan *bartola*. Porque ya se te entiende [cuando lees]. Antes no, te quedabas allí como errr, errr, errr[27]". Isabel reported making progress in her reading, but wanted to learn more so that she could be a stronger member of her parent group and an educational support for her children at home. These episodes of shaming, or *la vergüenza,* experienced by participants recurred across cases.

In another instance Ramíra told me about her experiences with literacy at the doctor's office.

> Yo siempre me hacía a un lado para que no me dejaran en *vergüenza* y todavía me da pena que me dicen que lea. O cuando voy al doctor o algo y me dicen, "Ya leyó éste." Y les digo, "Sí," aunque no lo lea.[28]

Ramíra's example demonstrated, maybe even at the risk of her physical wellbeing, tactics used by the participants to evade and resist the stigma of *el analfabetismo*. However, in other parts of the interview participants revealed how even as they tried to resist the stigma and the shame that came with *el analfabetismo,* it permeated their self-perception. Anita suffered from mental distress provoked by her childhood and adulthood experiences. In one occasion, Anita reported that she felt her husband was being unfaithful. Filled with emotion she told me: "Me sentí humillada...porque [mi esposo] tuvo otra persona en su vida que era superior, inteligente, y bonita.[29]" In other words, she described herself in opposition to this woman who she felt was superior to her because she assumed her to be intelligent and attractive.

Similarly, Federico struggled with this social stigma himself:

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[27] You are not as slow now. Because now people can understand you [when you read] and not before. Before, no, you would get stuck like errr, errr, errr.

[28] I always step aside so that I was not put to shame and I still feel *embarrassed* when they ask me to read. Or when I go to the doctor or something and they say, "You read this already." And I tell them, "Yes!" even if I haven't read it.

[29] Talking about not knowing how to read and an incident with her husband: I felt humiliated…because [my husband] had another person in his life that was superior, intelligent, and attractive.

56

> Esto, cómo le mencioné la vez pasada, esto es una cosa que están haciendo ustedes [refiriéndose al programa de aprendizaje por celular], pues si no lo aprovecha uno de plano es más tonto de lo que uno está. Pero no debe de decir uno tonto porque no soy tonto…[30]

In his first interview Federico confessed that he had never told his children about his inability to read. Federico argued that they knew of his poverty and that he had limited schooling opportunities, yet they did not know of his limitations with literacy. Federico was a very accomplished man by many standards. After his arrival to the United States, Federico started his own business with the help of his wife and using his experience as a construction worker. Specializing in mosaic work, he was commissioned to do work in Olvera Street, a historic landmark in Los Angeles. His children had all attended higher learning institutions and had professional titles. Yet even with all these markers of achievement, Federico struggled with the social stigma of *el analfabetismo*. Even when he recognized himself as a productive self as he told the stories of his achievements, he could not identify as *productive literate self* (Rogers, 2004). *La vergüenza* and the struggle to overcome humiliation played an important role in participants' definition of literacy. Literacy for participants, in a large measure, equated with human dignity.

Lived Literacy: A Shared History of Participation

The participants' histories of participation spanned across a lifetime and were situated within a transnational setting. Another constant factor shaped participation in education and literacy in this study—economic survival. In her work *La escuela cotidiana*, Elsie Rockwell (2005) observed that *la ecolaridad*, or schooling for young children in México, involved a trade-off between formative educational experiences found in schools and the formative experiences

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[30] This, like I mentioned last time, this is a thing that you are doing [referring to the literacy over the mobile phone program], well if one does not take advantage, one is really dumber than one already is. But one should not say dumb because I am not dumb…

outside of schools. Similarly, during their childhood the participants in this study found themselves having to choose between attending school in their home countries and helping the family financially while being apprenticed into trades such as agriculture or carpentry.

Once in the United States as young adults, in some cases, data suggested that 90% of immigrant Latina/o adolescents aged 16-19 were pushed-out early from U.S. schools (Frey, 2003). Frey (2003) explained this tenuous retention by pointing to the primacy of work and economic survival for this population. Moreover, Hernández-Zamora (2010), in his transnational study Mexican adults on both sides of the U.S.- Mexico border, argued that social and transnational economic inequalities primarily influenced opportunity and access to education for this population, both at home and in the United States. The juxtaposition of these works underscores the significance of economic survival in mitigating school opportunity over a lifespan for adults acquiring basic literacy skills.

In "Storied selves: A critical discourse analysis of adult learners' literate lives*,"* Rogers (2004) captured what she termed a *history of participation,* or a narration by adults depicting their participation in schools and in literacy practices. Zamora-Hernandez (2010) termed these narratives "literacy trajectories" in his transnational study of Mexican nationals and Mexican immigrant adults. In their interviews, participants also fashioned their identity as they spoke about their experiences with school and literacy. In undergoing this process of narration, they reflected on the reasons for participation and exclusion from school practices. They understood that conditions of poverty severely truncated their participation in school as children.

As children, many of the participants described an economy of subsistence where formal education played a marginal or oppositional role. This economy of subsistence was a constant in their home countries and after their migration to the United States. While I discuss the economy

of subsistence and its primacy in their literacy experience, I also underscore that "…narrators can construct different identities, depending on the need and the objective of the communicative event," (Bauman, 2000). In these particular interviews, the narrators constructed their stories for an educational researcher and literacy instructor. Both of these identities shaped the narratives shared by participants. The following three narratives depict three re-constructions of histories of participation in education and classroom-based literacy practices across a lifespan. By using Rogelio's example of early childhood education, Anita's experience with adult education in Mexico, and Mariela's participation in adult education in the United States, I try to underscore the common patterns across the fifteen narratives while also illustrating the unique experience of each of the participants.

Rogelio: Early childhood education. Rogelio's re-telling of his early childhood experiences unfolded into a series of almost fantastic stories. In one such instance he remembered the stories told by his grandmother about life in the mines of Hidalgo, Mexico. It was through these stories that I learned that Rogelio's history of participation with literacy and school was also anchored in generational experiences with literacy. Through this narration Rogelio told about a history of participation in education and literacy that included the experiences of his parents and grandparents.

A cross-generational account of literacy—Spanish

Rogelio: También…mi mamá no sabía leer. Mi mamá y mi papá se quedaron hurfanos desde muy pequeños, verdad. El papá de mi mama, él, éste, era minero, y pues eran muchos sus hijos, eran muchos y, éste, en las minas le pagaban muy poquito. Entonces, éste, mi abuelito junto dinero para comprar una pistola y le dijo a mi abuelita que cuando el se sintiera mal, si un día no podía llegar de regreso hasta la casa o que se sentía mal y no iba a llegar hasta las minas que iba

a descargar su pistola. Y cuando lo oyera, que cuando ella oyera que disparaba con su pistola

que se preparara para el velorio. Entonces, así se murió mi abuelito porque estaba enfermo de

los pulmones y un día el salió de trabajar y pues estaba muy (inaudible) y cuando el se sintió

mal, que empezó a tocer y le empezó a salir sangre, descargó su pistola, y entonces mi abuelita

dijo, "Creo que sí vamos a recoger a tu papá," pues a mi abuelito… Mi mamá era la más chiquita

de todos así que no tuvo oportunidad de ir a la escuela. No tenían ni para enterrarlo porque las

minas no se hicieron cargo de él…

Researcher: Pues, se sabe mucha historia de su familia, ¿no?

Rogelio: Sí porque, este, allí a donde yo iba a trabajar con mi papá, a donde tenía la tortillería,

allí vivía mi abuelita, la mamá de él. Y ella me platicaba muchas cosas.

Researcher: Entonces, también iba para que le platicara su abuelita. (Risas)

Rogelio: Sí, era como mi escuela. Ella tampoco no sabía leer ni escribir, pero, uy, ella se sabía

muchas historias.

A cross-generational account of literacy—English

Rogelio: Also…mom did not know how to read. My mom and dad were orphaned from a young

age, right. My mother's father, well, he was a miner and, well, his children were many, they

were many and, well, in the mines he was paid very little. Then, well, my grandfather saved his

money to buy a pistol and he told my grandmother that when he felt ill, if one day he could not

return home or he felt ill and he could not return to the mines, he would discharge his pistol.

And when she heard, when she heard the pistol rounds that she should prepare for the funeral.

So that is how my grandfather died because he was sick from his lungs and one day he got out of

work and well he was very (inaudible) and when he felt sick, when he started coughing and

blood started coming out, he charged his pistol and my grandmother said, " I think we are going

to go pick up your dad." Well, my grandpa… My mother was the youngest of all so she was not able to go to school. They did not even have money to bury him because the mines did not want to take responsibility…

Researcher: Well, you know a lot of your family's history, no?

Rogelio: Yes, because, well, when I went to work with my dad, where he had the *tortillería*, that is where my grandma lived, his mom. And she would talk to me about a lot of things.

Researcher: So you would also go so that your grandma could talk to you. (Laughs)

Rogelio: Yes, it was like my school. She did not know how read or write, but she knew many stories.

Rogelio's hometown of Hidalgo, Mexico had a rich mining history, dating to the colonial era. Sariego and Paucar (1982) offer a discussion of the perilous work conditions undergone by the miners even after the modernization of the industry. The death-defying conditions, captured in Rogelio's narration, summarized Sariego and Paucar's (1982) findings about the short productive life of the miner[31]. Education and literacy was not readily available to the children of miners. Even when families had access to schools, the miners' households survived on a meager and short-lived salary that often left a widowed wife and orphaned children to undertake a survival economy. Consequently, Rogelio's mother was not enrolled in school. As a mother, she made sure to enroll Rogelio in school, but he *preferred* to help his father with the *tortillería* to meet their daily family needs, including making enough to buy medication for his brother. In addition to this work, Rogelio helped his father "draw signs." This consisted of *el iluminar,* or filling in the letters of a sign for different business. Since his father could not write, he hired a

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[31] Sariego and Paucar (1982) suggested that the inaccurate statistics poorly reflect the real human casualties left behind by the mining industry. In some ways, Rogelio's account presented a more accurate qualitative description of these conditions.

friend to sketch out the letters for father and son to illuminate. In addition to learning different trades when he should have been at school, Rogelio reported that he reaped and enjoyed listening to his grandmother's stories. In the United States Rogelio was a transient, exceptional among the participants, and he held on to his family history as he roamed the city.

This narrative illustrated one of the common experiences among participants, the trade-off discussed by Rockwell (2005) between early childhood education and the formative experiences outside the classroom. In his early childhood experience, as evident across the narratives of participants, Rogelio's decision to help his father instead of attending school had everything to do with the family's economy survival. Rogelio understood that by leaving school he would be contributing to the financial viability of his household while learning skills that, arguably, held more value in a society with a rigid class structure, with a high demand for *obreros*, and not enough work opportunity requiring formal education (See Ibarrola, 2007). Similar as found across cases, this narrative also highlights the informal learning opportunities encountered by participants. In his case, Rogelio learned his father's trade in la *tortillería* and the value of the written word as he earned money to paint the signs around his town. Another common factor in the narratives of early childhood, although not in all cases, was a cross— generational account of literacy and schooling. Because of *abuelita's* stories, Rogelio was able to historicize *analfabetismo* in his family with his cross-generational account. He was able to make cross-generational connections between his own experience with literacy and the experience of his parents and grandparents.

Another salient theme across narratives included the retrospective regrets of not attending early education. In the case of Rogelio, while he enjoyed working with his father and listening to his grandmother's stories, he also narrated with a tone of regret not being able to do both.

62

Like some of the participants, Rogelio remembered growing up feeling socially isolated from his peers as a child. Rogelio noted, "Es feo cuando no va uno [a la escuela] porque, éste, ya los otros niños no se quieren juntar con uno[32]." At the time of the interview, his regrets stemmed from a dire need for basic literacy skills, particularly because he had immigrated to the United States without a familial network. In addition, he, like many of the participants, believed that if they had access to basic literacy skills they would also have access to better work opportunities in the United States.

In *The use of orality and literacy in rural Mexico: Tales from Xaltipan*, Rockwell (2001) discussed Cleofas' adaptation of literacy to his needs in a rural town in Mexico. For Cleofas literacy served an "instrumental" and "memory-support" function (Rockwell, 2001, p.230), specifically in official context where documentation helped him navigate the local government bureaucracies. His third grade education was only one of the avenues through which Cleofas developed and appropriated literacy practices. In addition, through his role in town leadership he observed the literacy practices that afforded most currency in his exchanges with governmental agencies and he appropriated them in his role as a town leader. Rogelio and the participants in this study did not possess the basic literacy skills to further develop their literacy through context, as in the case of Cleofas in the rural town of Mexico. Moreover, in this context the official agencies and system were foreign to participants and mostly operated with English as a de facto language. These contextual factors in the United States situated participants in more vulnerable scenarios than those described in Rockwell (2001). At the time of their interview, participants reported feeling a sense of frustration and helplessness with their inability to read and write in this new setting. Although, Rogelio was exceptional in that he immigrated to the

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[32] It is ugly when one does not go (to school) because, uhm, the other children don't want to hang out with you,

United States without a familial network, most of the participants in this study found comfort in their familial networks.

   Anita: Adult education in Latin America. Anita recalled her early adolescence and her experience with adult education in her home country with great emotion. In this particular excerpt, Anita reconstructed herself as an ambitious and eager young lady hopeful and overjoyed with her move to the city. Anita and her family resided in a small rural town near Mexico City. She left her hometown for a job as a domestic worker in the city at age eleven. At 12 years old, her *patrona* or boss enrolled her in an adult education program. She later realized that this educational experience was intended for the service sector, or the other domestic workers in the neighborhood. In her narrative of this period of her life, Anita demonstrated conflicting emotions of great hopes and of intense disillusionment with her life in the city.

A narrative of hope and unrealized dreams-Spanish

Researcher: Entonces, ¿éso es de su niñez, ahora, usted fue a la escuela algo o se acuerda de algo de la escuela?

Anita: Algo de la escuela, pues, en la ciudad de México. Sí, me acuerdo. Me enseñaron, prim, primero, me enseñaron a hacer la primera letra. Cómo se llamaba, cómo la tenía que escribir. Pero de eso yo tenía como unos once años…

Anita: Me enseñaron cómo se pronunciaba. Me enseñaron cómo era la escuela, uhm (pausa). Pues para mí qué era como saber qué significaba leer. Qué significaba, qué significaba, qué era (pausa). Para mí, yo lo que aprendí es que era como un ejemplo, como respeto, y leer. Pues, era como una responsabilidad, me entiende…

Researcher: Entonces, ¿usted siente que en ese tiempo estaba aprendiendo más como estar en la escuela más que aprendiendo…?

64

Anita: Sí, porque yo cuando fui a la escuela. Pues, sí me apuntaron, pero a una escuela de grandes. Quiero decir, ya de mi edad, que yo tenía que estar en edad de una escuela, una escuela, una escuela. Pues, una escuela. Quiero decir una escuela de mi edad, con niños…

Researcher: ¿Entonces usted fue a escuela para adultos?

Anita: Sí, ya de grandes…

Researcher: ¿En ese tiempo que estuvo en la escuela recuerda algo que le haya gustado o algo que no le haya gustado?

Anita: Lo que a mí me gusto, bueno, lo que a mí me gusto de la escuela, es de que yo quería…Bueno, a mí me gustaba todo (empieza a llorar). Me gustaba el momento. Me gustaba superarme. Pero no se porque no lo hice. Yo pienso que fue por mi niñez o tal vez fue porque fui una tonta…

A narrative of hope and unrealized dreams-English

Researcher: Then, that was your childhood, now, did you attend school or do you remember something about school?

Anita: Something about school, well, in México City. Yes, I remember. They taught me first, they taught me how to do the first letter. What it was called, how it was written. But then I was eleven years old…

Anita: They taught me how to pronounce them. They taught me about school, hum (pause). Well, for me, it was like knowing what it meant…to read. What it meant, what it was (pause). For me, what I learned was that it was like an example, like respect and reading. Well, it was like a responsibility, you understand…

Researcher: Then, you felt that during that time you were learning more how to be in school rather than learning…?

Anita: Yes, because I went to a school. Well, they enrolled me, but into adult school. I mean, my own age, I had to be in an age appropriate school, a school, a school, well, a school. I mean a school for my age, with children…

Researcher: Then, you went to adult school?

Anita: Yes, for older [students]…

Researcher: During that time that you were in school, do you remember something you enjoyed or did not enjoy?

Anita: What I enjoyed, well, what I enjoyed about school is that I wanted…Well, I enjoyed everything (begins to cry), I enjoyed the moment. I enjoyed bettering myself. But I don't know why I did not do it. I think it was because of my childhood or maybe because I was ignorant…

  As the interview continued, Anita told me that at the time she did not understand her situation. She realized later, as she reflected on this experience, that all of the students labored in the homes around the school. They all worked for others as gardeners, housekeepers, or providing childcare. Anita narrated, "…pero ahora con el tiempo ya voy comprendiendo, que, que, que era el trabajo[33]." At the time, something did not seem right to Anita, especially because some of children in the primary school made fun of her for going to school with the adults. However, she held fond memories of her time in the classroom. Anita stopped attending school at age thirteen when she became pregnant with her first child, fathered by a military officer she met on her strolls from school to work. After this, Anita returned to her town with her parents where she married a local town boy. Not completely satisfied with her situation and feeling her ambition quenched, Anita became depressed. In her early twenties, Anita was diagnosed with mental distress that she currently struggles to control.

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[33] …but now with time I am understanding, that, that, that it was work.

Anita's narrative was unique for a couple of reasons. Participants demonstrated varied levels of emotional distress during their interview; however, Anita was the only participant to report clinical depression. Anita's experience with adult education was also unique among participants. Anita was the only participant to attend adult school in her home country. At this point in their life, the participants enrolled in the study were fully committed to one or more jobs, making it impossible for them to attend adult education in their home country. Others reported not being aware of any adult education programs in their home country. Others still had, in early and late adolescence, other more pressing responsibility such as their own families.

Even as an exceptional case, Anita's narrative revealed common trends found in the stories of other participants. Like Anita, many participants provided examples of the ambivalent relationship they had with education institutions and formal literacy. On the one hand, they enjoyed learning and being in the classroom because they felt a sense of achievement. Yet, the obstacles and the shaming they encountered only made them realize that the curriculum was intended to keep them on a certain track as *la mano de obra barata*, or the cheap labor force. As in Anita's case, she discerned that more than learning the alphabet, she was learning about respect and manners. Apple (2000) and other critical scholars have argued that schools historically have played complicit roles in the oppression of the underclasses. On the other hand, participants also underscored the aspirations and hope inspired by their participation in formal education. They remembered their time in school as a rupture with continued oppression and a moment to dream of *superación*—or bettering themselves. This was important because even with the disillusions of previous encounters with education, these participants entered the mobile learning experience with the same hopeful aspirations they held for their earlier educational experiences.

Participants' common experience as *mano de obra*, or the working class, was also reflected in Anita's narrative. In his work on adult education in Mexico, Hernández-Zambrano (2010) discussed the overarching economic and political structures, namely neoliberalism, that structured the literacy trajectories of the adults he interviewed. The examples provided by Anita revealed the finer grain of macro structures that condition the lives of men and women in the workforce and the "push" into the city. This "push" from the countryside to the city was also evident across cases. As Anita narrated and re-organized her account, she spoke of the "push" from the countryside to the city as a welcomed change in her life, at least in the beginning. However, as noted by scholars who interrogate the subjectivity of gender in the context of globalization, the "push" into the labor market from rural to urban sectors and/or transnationally did not translate into more equitable conditions for women and men alike (Bohem, 2004; Dore, 1997; Fowler-Salamini & Vaughan, 1994; Fernandez-Kelley, 1983; Ong, 1987; Pessar, 1999).

As in the case of other participants moving from rural areas to urban areas, Anita found the transition into the city to be a hopeful moment for her that filled her with ambition. However, her narrative also shed light on the limited scope of opportunity for Anita in the city. She landed a job as a domestic worker—labor traditionally reserved for women in a transnational labor market (Dore, 1997; Fernandez-Kelley, 1983). Then, Anita attended a school for adults, an opportunity not available to her in her hometown. However, she later learned that this education was reserved for the service sector. Thus, while Anita held high hope for herself as she entered the labor market in the city and as she attended school, these were not designed to encourage her ambitions. In general, this was true for participants across cases. Additionally, participants felt the "push" factors of a transnational economy and abandoned their ambitions for formal

education. Instead, they sought their hopeful ventures through their immigration to the United States.

Mariela: Adult education in the United States. In her sixteen years of residing in the United States, Mariela attended one adult education program in East Los Angeles. She remembered the school fondly and found it effective because it provided instruction in both Spanish and English, similar in structure to dual language programs in K-12 education (Hernández, Takahashi-Breines, & Blum-Martínez, 2003; Morales & Aldana, 2010). The instruction time was divided equally between Spanish and English. This dual language approach to teaching adults deviated from the normative English-only approach to teaching immigrant adults (Auerbach, 1993; Wiley, 2005). Auerbach (1993) studied the prevalence of this ideology in the English as a Second Language (ESL) classrooms attended by immigrant populations in the United States. She argued for further exploration of the utility of students' L1 in adult education. Mariela's participation in adult education was a unique encounter with a type of instruction seldom encountered in U.S. adult education programs. In the following narrative Mariela spoke about her experience in this short-lived program.

A narrative of language diversity in adult education in the United States-Spanish

Mariela: [Cuando era niña] mi mamá me chiquiaba. Entonces, le decía que me dolía el estomago por no ir a la escuela. Nunca fui a la escuela.

Researcher: ¿Y ya de mayor fue a la escuela?

Mariela: En los diesiseis años que tengo aquí fui a una escuela de chinitos pero *no aprendí ni la o por la redonda*. Pero allí empece a conocer las letras, pero no sé juntarlas. Lo qué se aprende no se olvida y eso no lo aprendí. Estaba bonito el programa. Tenían un programa bilingüe. Nos daban clases de inglés de las ocho de la mañana hasta las diez. Luego, nos daban clases en

español de medio día como hasta a las dos. Deje de ir nada más porque lo cancelaron. Pero

aprendía una bien agusto.

Researcher: ¿Y por qué quiere usted aprender a leer ahora?

Mariela: Se abre caminos... Fíguese, mucho tiempo trabajé en fabrica *trimiando*. Nunca apliqué

para trabajar en tienda porque no sabía leer. Y allí me quede.

A narrative of language diversity in adult education in the United States-English

Mariela: [When I was a child] my mom would coddle me. So I would tell her that my stomach
hurt so that I did not have to go to school. I never went to school.

Researcher: And as an adult did you go to school?

Mariela: In the sixteen years that I have been living here I went to a Chinese school, but I *did*

not learn a from b. But there I started to distinguish the letters, but I did not learn how to join

them. What one learns, one does not forget and that, I did not learn that. It was a nice program.

It had a bilingual program. They taught in English from 8am to 10am. Then, they taught in

Spanish from, like noon to 2pm. I stopped going only because it was cancelled. But it was a

pleasant learning experience.

Researcher: And why do you want to learn how to read now?

Mariela: It opens doors... Look, for a long time I worked in a trimming factory. I never applied

to work in the store because I did not know how to read. And that is where I stayed.

Mariela recalled not learning much in her adult education classroom until she tapped into

her memories of the bilingual classroom. She had just started learning the letters of the alphabet

when the program was discontinued. The fondness of the memories in her *escuelita* or her dear

school was evident in this account. This observation supports one of Auerbach's (1993)

arguments in favor of a more linguistically diverse approach to adult education. In her work,

70

Auerbach (1993) underlined that a monolingual approach to education in adult education could be traced to the Americanization movement in the 20th century, designed to promote homogenized U.S. values (p.13). She also underlined its adverse effects, including the "revolving door syndrome" where students enter programs only to exit because they lack the basic skills in their L1. In addition, she documented the exclusion reported by immigrant students in other works in the field (p. 18). In her account, Mariela reported enjoying her experience in school, even though her L1 literacy was not fully developed. As Auerbach (1993) and other scholars in adult education have argued, Mariela's experience in adult education was meaningful precisely because her L1 abilities were assessed and included as an integral part of the instruction.

Similar to her peers, Mariela attributed her stagnation in the labor market to her lack of basic literacy. In his work on transnational Mexican adults and literacy, Hernández-Zambrano (2010) organized the life trajectories of those he interviewed into three voices: agents, transnationals, and survivors. For the author, agents were in direct opposition to survivors. Survivors struggled to get by while not understanding and acting against their material conditions. He argued:

> In other words, development can be seen as a transition between performing a position to consciously authoring one's place in the world, and education as an enterprise of creating a more conscious and active agents. Consequently, what people like Felipe truly need to develop is not precisely his basic literacy skills, but his sense of agency, his sense of *value as a human being* and his voice and responsibility as a citizen (Hernández-Zamora, 2010, p. 188).

Hernández-Zamora's (2010) categorizing of adults into agents and survivors in his analysis presented a dichotomy of self not found in this study. For example, Mariela explained that her inability to read and write also reified her place in a market economy. Thus, she understood that

71

school-based literacy was not just about knowing how to read and write, but that it also mitigated her social and economic standing.

The participants in this study each held an understanding of their social positioning. Further, to varied degrees and in different instances, participants accepted or contested these roles as evident in the narration of their histories of participation. Contrary to the schemas presented in Hernández-Zambrano (2010), participants narrated themselves as actor caught in the contradictions of a neoliberal market economy. They employed a wide array of tactics to both perpetuate and resist the macro forces discussed in Hernández-Zambrano (2010). In the case of Mariela, she continued her role as a factory worker without feeling confident enough to apply for a position as a sales clerk at a store. At the time, this was the arrangement she enacted, but not passively. In the years that followed she decided to remove herself from the formal labor economy to help her husband with his *negocito*, or his small shoe repair business. I would argue that Mariela, in the moment, could not act against her oppression in the garment factory. However, in time, she found an alternative.

Lived Literacy: Other Ways of Reading the World

In his work, Street (2003) provided a definition for New Literacy Studies:

What has come to be termed the "New Literacy Studies" (NLS) (Gee, 1991; Street, 1996) represents a new tradition in considering the nature of literacy, focusing not so much on acquisition of skills, as in dominant approaches, but rather on what it means to think of literacy as a social practice (Street, 1985). This entails the recognition of multiple literacies, varying according to time and space, but also contested in relations of power, (p. 77).

This approach to the study of literacy has expanded the understanding of literacy practices to include those more germane to communities. Street (2001) defined literacy practices as "broader cultural conception of particular ways of thinking about and doing reading and writing in cultural contexts," (p. 17-29). His work, based on the fieldnotes from his work in an Iranian village,

72

suggested that different literacies had distinct currencies in particular context. As such, Rockwell's (2001) approach to the study of literacy, also from an ethnographic perspective, shed light on the literacy practices that enabled adults in rural villages to function as a town leader. Cleofas, the participant in Rockwell's study, demonstrated the ability to appropriate bureaucratic literacy practices to act as a town leader, although his school participation had been as limited as that of the participants in this study. Reading and writing were valuable in so far as he dealt with governmental agencies. Moreover, Cleofas' skilled use of oral traditions and his knowledge of history also equipped him to effectively maneuver his role as a town leader. Thus, in this study Rockwell argued that Cleofas was an effective leader because of his ability to maneuver the different literacy practices to the extent that they served *him*.

Table 4.2 partially summarizes some of the activities and the skilled practices reported by the participants in the course of the interviews and interactions. In depth ethnographic evidence would help clarify the distinct literacy practices found in participants' activities. Nonetheless, the table does demonstrate that, as in the work of Street (1984) and the work of Rockwell (2001), reading and writing were important literacy practices for participants. However, these practices held more currency in their interactions with official institutions such as schools, clinics, and/or churches. In their daily activities participants relied on their numeracy skills and memorization abilities to execute daily transactions. Also, participants noted their use of management skills in both their homes and work settings to execute daily activities. Notably, women had to manage a workday and their domestic labor at home[34].

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[34] See Fowler-Salamini &Vaughan (1994) & Seltzinger (1998) for a discussion on *la doble jornada* or the double workday undertaken by working class women in Latina American and across the globe as they enter the workplace.

Table 4.2 *Participants' activities and life skills*

Name	Activities	Skill Sets
Marcia	Housekeeper, Homemaker/Childcare	Numeracy, Memorization, Management
Isabel	Trimming, Housekeeper, Homemaker/Childcare, Community Organizer, Adult School Student	Numeracy, Memorization, Speaking, Management
Nachita	Housekeeper, Homemaker/Childcare, Play Yard Volunteer, Church Member	Numeracy, Memorization, Enforcing Play Yard Rules, Management
Anita	Live-in Housekeeper, Childcare, Homemaker/Childcare	Numeracy, Memorization, Management
Beto	Carpenter , Day Laborer, Church Member	Numeracy, Memorization, Carpentry, Flexibility
Ramíra	Factory work, Street Vendor, Homemaker/Childcare	Numeracy, Memorization, Buying & Selling, Home Remedies
Marisol	Housekeeper, Childcare, Homemaker/Childcare	Numeracy, Memorization, Management
Jovita	Childcare/Homemaker, Adult School Student	Numeracy, Memorization, Management
Horacio	Construction, Business Owner	Numeracy, Memorization, Welding, Management
Mariela	Shoe Repair, Trimming, Childcare, Homemaker	Numeracy, Repair Skills, Management
Federico	Construction, Business Owner	Numeracy, Mnemonic Devices, Sketching, Coding Systems, Tile Work, Management, Persistence
Pepé	Field Worker, Packaging Company, Church Advocate	Numeracy, Memorization, Agriculture, Speaking
Beatriz	Hospice Care, Childcare, Homemaker, Church Advocate	Memorization, Lifting Techniques, Management, Speaking
Rogelio	Carpenter, Painter, Construction Work, Day Laborer, Homeless	Numeracy, Memorization, Carpentry, Street Knowledge, Flexibility
Esperanza	Fast Food, Temporary Labor Agency, Homemaker, Childcare	Numeracy, Memorization, Flexibility, Management

As evident in the narratives, participants had developed many skill sets over the course of their lifespan. They also relied on various methods to circumvent situations that required reading and writing. As an example, Federico managed his own business with the help of his wife. He narrated how he kept an inventory of the construction supplies a job would require:

Narrative of life skills-Spanish

Federico: En la pura cabeza. Cuando compro, por ejemplo, en mi trabajo, que yo siempre tenía que comprar todos los materiales, éste, yo lo mezclaba. Lo hacía como en claves. Éste, y yo

74

ponía, por ejemplo, voy a comprar barrotes, ponía la línea de los barrotes—pun, pun—la medida (Federico dibuja en la libreta), que largo y todo y ya nomás ponía. Ya nomás leía la cantidad y medida de los barrotes y ya sabía lo que iba a comprar…Puros numerous. (Hizo un dibujo de los barrotes con las medidas númericas a los lados para ilustrar.)

Federico: Just in my head. When I buy, for example, in my work where I always had to buy materials, well I mixed them. I made keys for myself. Well, and I would put, for example, I am going to buy bars, paw, paw, the measurements (Federico is writing on a notepad), the length and everything and there I just put it. I would just read the quantity and the measurements of the bars and I knew what I was going to buy. Just numbers. (He drew the bar with numeric figures on the sides to illustrate.)

Federico, in the same way as his peers, dealt with reading and writing tasks by applying other relevant skill sets acquired through life experiences such as persistence. In addition, they sought the help of their trusted social networks. For example, Federico used his own coding systems to take inventory of what he would need for a construction project. At the same time, one of the skill sets he underscored the most was his persistence, especially when confronted by heavy print tasks such as acquiring construction permits with the city. In other instances participants avoided these activity settings all together. For example, participants reported not applying for jobs that required filling out an application or required reading and writing. Earlier, Ramíra reported avoiding being embarrassed at the doctor's office by stating that she had read the paper work provided when she had not. These examples of skills sets acquired and appropriated over a life span to counter the inability to read and write were found across cases.

Some participants reported constructive skill such as the ability to be persistent while others used avoidance as a tactic that worked to their detriment when looking for better work opportunity or when it came to healthcare.

Conclusions

The participants who enrolled in this literacy program brought with them life skills acquired over the course of lifespan. Additionally, they held a belief that school-based practices such as reading and writing held practical and self-valorizing attributes. In other words, participants defined literacy as socially meaningful and they regarded school-based literacy as a hopeful avenue, even when they had felt shamed in educational settings. Across cases, literacy was discussed most saliently as a vehicle towards *ser alguien* or being someone, more efficacious interdependent participation in their familial structures, and combating *la vergüenza* or the shame associated with *el analfabetismo*. These were the ambitions held by the participants as they encountered this mobile literacy project. They projected onto this experience their desires to be someone, which included *abrir puertas*, or opening doors, in the labor market and in different social circles. Moreover, they sought to be treated with dignity and escape the shame that came with certain episodes where they were marked as illiterate. Lastly, they aspired to be more efficacious members of their families and communities. The following chapter will discuss the affordances of mobile learning to meeting the needs of this transnational and marginalized understudied segment of the immigrant Latina/o population. I approach the analysis of mobile learning and situated affordances with their educational aspirations as a background.

CHAPTER 5

IMMIGRANT LATINA/OS AND MOBILE LEARNING

Introduction

Mobile learning and other forms of digital learning continue to expand as fields of study. In *The use of instructional technology in schools: Lessons to be learned*, Mal Lee & Arthur Winzenried (2009) depart from the argument that a unique digital take-off is underway in society and schools. As digital technologies play an increasingly important role in formal and informal learning, researchers and educators seek to understand the affordances of digital technologies, specifically as they pertain to communities of practice (See Heath, 1983; Street, 1984; Street, 1993; Rockwell, 2001). The last chapter contextualized the literacy practices of the fifteen participants in this study. This chapter examines their engagement with digital technologies, primarily mobile phones. Moreover, the chapter studies the affordances of mobile phones as contextualized by the experiences and perceptions of immigrant Latina/os adults—learning basic literacy in Spanish[35].

In this chapter I argue that the epistemic affordances of mobile devices are undergoing a process of definition in scholarly works (see Sharpless, 2006; Taylor et al., 2006). I focused on three epistemic affordances: affordances bridging formal and informal instruction (Cook, Pachler, & Bradley, 2008); the collaborative affordances of mobile devices (Hanewald & Ng, 2011; Mobile Learning Week, 2013); and affordances that foster learner-centered approaches (Sharples et al., 2002). In addition, I argue that the current scholarly conversations about

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[35] Most of the students in this case study were Spanish speakers with the exception of Pepe.

epistemic affordances should grapple with the study of marginalized communities in order to portray the emerging affordances accurately and to avoid a narrow definition of a "normalized" user[36]. In the following discussion, I present three digital portraits to depict the range of mobile phone usage among the participants. Subsequently, I use narratives to illustrate and discuss the salient mobile learning affordances reported by participants. These situated affordances are discussed within the context of the three most relevant epistemic affordances found in the scholarship of mobile learning. By juxtaposing the two, I propose to extend the parameters of current theories in mobile learning to include those at the margins of the technology boom.

Digital Selves: Three Portraits

Of the 15 participants in the analysis, 10 participants owned or shared ownership of a mobile phone. In other words, 67% of the participants had some form of access to mobile phones[37]. The Pew Hispanic Institute calculated mobile phone usage among Latina/os at 76%. The variability in figures may be explained by a constant in participants' access to mobile phones. Their access to mobile technology was characterized as tenuous and highly dependent on participants' fluctuating financial situation and/or the sharing agreement held with their spouse, siblings, and/or friends. The following three portraits exemplify the users found across cases. Table 5.1 provides a glimpse of the three participants described in the portraits.

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[36] Many of the studies referenced in the search of epistemic affordances were conducted with university students. Few exceptions are found in the study of marginalized communities and mobile learning (Aker, Ksoll, & Lybbert, 2010; Mehta et al., 2011). These exceptional studies took place in mostly rural settings within developing countries. None addressed the specificity of transnational marginalized communities in urban cities and developed countries.
[37] In the larger evaluation study, which included the 70 participants, it is worth noting that only 27 of the total participants, or 39% reported mobile phone ownership.

Table 5.1 *Three profiles of mobile phone usage*

Participant	Mobile Owner	Use Before Cell-Ed	Use During Cell-Ed
Ramíra	Y	Employment Everyday Management & Logistics Leisure	Cell-ED Employment Everyday Management & Logistics Leisure
Beto	N	Did not own one, but expressed a need and desire to own one for work	Cell-Ed Employment Everyday Management & Logistics Leisure
Beatriz	N	Had never used one and did not feel it was useful.	Cell-Ed— supported by caregiver only

These portraits weave together participant interviews and recorded observations gathered in the course of the study. For example, I observed and recorded Ramíra's interaction with the mobile phone program after running into her at a local parish. Ramíra informally sold used merchandise across the street from the church and used the mobile phone program as she waited to make a sale. I explored these notes further during the formal interviews. In writing the portraits, I first established general patterns of users across cases. Then, I used interview data, observation notes, and teaching logs to elaborate on each of the portraits for a "thicker" description of each user (Geertz, 1973). Like the narratives, these portraits rely primarily on information collected during the interviews. However, the third-person retelling found in the portraits facilitated a direct integration of the different data sources (e.g. interviews, observation notes, teaching log).

Ramíra's portrait: Mobile phone owner. Ramíra's most pressing concern was her subsistence. She participated in the informal market economy, selling used clothes, and appliances in different parts of her neighborhood. Her sales were not enough to provide for her

the basic needs. Thus, she took on jobs as they became available. For example, if a neighbor

contracted her childcare services for the day, she would make this her priority. Ramíra only used

the phone's voice features. The mobile phone was a vital tool as she strove to earn a living

because it allowed her to connect with these impromptu employment opportunities. She also

relied on the mobile phone to communicate with her household, including her sister and nieces.

Their communication included housekeeping logistics and message deliveries. However, her

mobile phone access was not consistent. Because of their financial situation, Ramíra and her

sister shared a mobile phone. Consequently, her access to the mobile phone depended on their

shared arrangements and ability to jointly make their monthly payment.

Ramíra wanted to learn how to read because she did not want to feel like she was less

than others. She mentioned a great interest in learning other things such as math and science, but

did not have the opportunity to do so because of her fluctuating schedule. In addition, Ramíra

talked about *la vergüenza* or the shame she experienced when she came across educational and

other official institutions. This shame was evident in her narrative of early adolescence and

adulthood as well. She recalled first feeling ashamed as a young lady when she noticed that her

peers could read and write. Ramíra was looking forward to learning how to read and write over

a mobile phone because it adapted itself to her unpredictable schedule and she did not have to

subject herself to the shame she associated with the classroom and her peers.

Beto's portrait: Mobile phone newcomer. Beto did not own a mobile phone, yet he felt

that both print and digital literacy were important capital to secure employment. Beto recognized

that many jobs were not at his reach because he lacked literacy skills. For example, he noted that

he would rather be in charge of inventory, but given his literacy skills he was only qualified to be

la mano de obra barata or the cheap labor. Also, he often saw people around him looking for

80

employment opportunities on the computer—opportunities to which he did not have access because of his limited engagement with technology. Moreover, Beto knew that a mobile phone would connect him with potential employers in his current status as a day laborer. In his circle, it was well known that owning or having access to a mobile phone increased the likelihood of being hired for a job. Thus, he was eager to acquire the literacy skills and to engage with new technology in order to find employment.

When Beto started participating in the mobile learning program, he also started using his loaned phone for employment and to touch base with his mother. Beto reported feeling sadness, frustration, and a sense of impotence because of his limited access to print literacy. He remarked, "Not being able to write something that I want frustrates me. It causes frustration and sadness because I see that really without knowing how to read, without anything, it is like being dead, like not having life. That is how I feel, that is the impotence that I feel." In a first instance, mobile learning represented for Beto the only viable avenue for formal learning since his most basic need was day-to-day employment. In addition, the mobile phone helped Beto regain the sense of control that escaped him before his enrollment in the mobile learning program. While participating in mobile learning, he was able to secure more jobs. When he wasn't employed, he spent hours on the mobile learning program. Beto reported feeling less anxious on the days when work was not available because he had *un pasatiempo* or a pastime activity.

Beatriz' portrait: Mobile non-user. Beatriz was retired and relied on Consuelo for her daily activities. For most of her adult life, she provided home care for disabled seniors. When she arrived to the United States from El Salvador, she took care of an elderly woman. She relied on her memory for many aspects of the job, such as providing her patients with medication. She also reported needing to know how to use her physical strength to move seniors around without

hurting herself or them. Beatriz learned these maneuvers by observing doctors and nurses. While she fared without reading and writing in her home country and in the United States, Beatriz underscored that her life could have been easier. Currently, she wanted to learn how to read and write to become more active in her bible study group. During a home visit, I noticed that Beatriz lived in a print-rich environment. Her walls were covered with prayers, certificates, and maps of El Salvador.

Beatriz was primarily interested in reading and writing. She was not interested in using the borrowed mobile phone for any other use. Mobile learning happened to be the only instructional program available to her in Spanish. It also allowed her to work in the privacy of her home and with her trusted caretaker, Consuelo. During her participation in the mobile learning program, Consuelo managed the mobile phone part of the learning experience for Beatriz. Consuelo would dial and turn on the loudspeaker. Beatriz would then listen to the lessons and practiced writing onto the notebook the letters that appeared on the mobile phone screen. Beatriz copied and verbally repeated the letters as she wrote them in her notebook. When she had finished her practice, Consuelo would prompt her to the next lesson in the same fashion. Beatriz did not adopt any other activity on the mobile phone, as did many of her peers. She did, however, start copying text from her bible onto her notebook. She emphasized that the mobile phone was not for her, but that she wanted to learn how to read and write.

As evident in the portraits, the mobile learners in this population of Latina/o immigrants found the mobile phone to be a viable alternative to the traditional classroom. For most participants working in an unpredictable and fluctuating informal economy, traditional classroom learning was not a viable option. For others, such as Beatriz, mobile learning offered an instructional program in her native language not found in her local adult school. In addition, the

mobile phone gave participants the option of remaining *en el anonimato* or anonymous,

momentarily avoiding *la vergüenza* associated with classrooms and peer learning. Instead, the

participants learned on their own time and sought the help of those they trusted most, such as

family members and friends.

Additionally, participants adapted the use of the mobile phone in a variety of ways.

Those who already owned a mobile phone came to see the mobile device as a learning forum.

The participants who were newcomers to mobile technology either adapted it to other

communicative needs and activities or rejected any new activities, with the exception of mobile

learning. Although, some newcomers enjoyed their borrowed phones and others did not use

them except for mobile learning, the common denominator across the participants was their

desire to learn how to read and write in Spanish. These portraits illustrated some of the

advantages to mobile learning as reported by the participants across cases. In the next section I

discuss in more detail the affordances to mobile learning using participants' narratives. Before

the discussion of affordances, I will explain the distinction between epistemic affordances and

situated affordances and their role in this analysis.

Situated Affordances of Mobile Learning

As the field of mobile learning expands, scholars search the generalizable affordances of

mobile phone technology. In the study of mobile learning, authors have explored affordances

that bridge formal and informal learning (Cook, Pachler, & Bradley, 2008); the collaborative

affordances of mobile devices (Hanewald & Ng, 2011; Mobile Learning Week, 2013); and the

affordances that foster a learner-centered approach to learning (Sharples et al., 2002). According

to these studies, the mobile phone has the potential to afford these unique learning opportunities

through its features. These features include: SMS format of communication, its ubiquitous and

mobile characteristics, and the communicative aspects of the device. In this chapter I anchored

the study of affordances on the narrated experiences of the participants—or what authors have

termed situated affordances. According to Mynatt et al. (1998), situated affordances consisted of

"…constant reformulations of social practice and technology use in these communities due to

change and learning," (p.126)[38]. Consequently, this approach to the study of affordances first

departs from the experience and the perceptions of learning communities. Thus, after

historically grounding the study in the educational and literacy experience of the participants, I

present the participants' narratives of affordances or their perception of affordances in their time

and space.

Digital-Selves: Narratives on Affordances

In discussing with participants what they enjoyed most about mobile learning, particular

affordances surfaced in the interview analysis. In this open-ended conversation, I searched for

narratives that centered on what mobile learning afforded them. These narratives were classified

using an inductive method to capture affordances specific to this context. In addition, I carefully

considered the scholarship on epistemic affordances as it pertained. I developed the relationship

between situated affordances and the epistemic affordances in the discussion. The affordances

found across cases lend a distinct understanding to the study of mobile learning affordances

because these were situated in the particular experience of immigrant Latina/os who sought basic

literacy skills in the midst of their struggles to survive in an informal economy.

Learning anytime, anywhere: *Tiempo para aprender.* One of the features of the mobile

phones that allowed participants to engage in this learning experience was its ubiquity. This

aspect of the mobile device was the most important feature of this learning experience because

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[38] Also see Gibson (1979) for a discussion on the *perceived* capacities of learning environments.

most participants reported schedules that conflicted with formal learning environments. Marcia's case was indicative of the significance of this mobile phone affordance. On this particular occasion, Marcia and I were talking over the phone because scheduling in person had become too difficult. Marcia worked as an informal childcare provider and did not get home until the late evening. When I contacted her one late evening, she was caring for her own children, and I could hear them in the background of this audio recording.

Learning anytime, anywhere: Tiempo para aprender-Spanish

Researcher: ¿Usted escribía sus lecciones?

Marcia: Sí. (Niño llorando en el trasfondo.)

Researcher: ¿Las practicaba?

Marcia: Sí.

Researcher: ¿Cuántas veces escribía cada lección?

Marcia: ¿Mande?

Researcher: ¿Cuántas veces escribía cada lección?

Marcia: Ahm una vez, dos, veces…

Researcher: ¿Y a qué horas estudiaba?

Marcia: A veces a las 10 pm, a veces a 5 pm de la tarde, a veces a las 10 pm, a las 9 pm…

Researcher: ¿Cómo fue esta experiencia diferente a su experiencia en la escuela de niña?

Marcia: ¿Cómo?

Researcher: Es decir, ¿cómo fue diferente aprender ya de grande y con celular que cuando usted era niña?

Marcia: Híjole! (silencio)…(risa) ¿Cómo? (risa) Es que se me va el avión.

Tiempo para aprender: Learning anytime, anywhere-English

Researcher: You wrote your lessons?

Marcia: Yes. (Child crying in the background.)

Researcher: Did you practice them?

Marcia: Yes.

Researcher: How many times did you write each lesson?

Marcia: Pardon?

Researcher: How many times did you write each lesson?

Marcia: Hum one time, two, times…

Researcher: And at what time did you study?

Marcia: Sometimes at 10pm, sometimes at 5pm in the afternoon, sometimes at 10pm at night, at 9am…

Researcher: How was this experience different from your childhood experience in school?

Marcia: ¿How?

Researcher: In other words, how was it different to learn as an adult and with a mobile phone from when you were a child?

Marcia: Yikes! (silence)…(laugh) How? (laugh) I lost my train of thought.

As is evident from the interview, Marcia did not have the luxury of time. Much of our interview seemed rushed and Marcia shared as she juggled multiple tasks. It is worth noting her patterns of study as observed in the Cell-Ed database. She studied late at night and until the early morning hours. She was observed calling the mobile learning platform in the evening from hours ranging from 7pm to midnight. From our weekly conversations, I learned that her husband helped her with the technological aspects of mobile learning. It also appeared from our

conversations that most of the domestic work and caring for the children fell on her shoulders, after a full day of work away from home. During her weekly calls, she was either making dinner and/or caring for the children. As in Marcia's case, many of the participants, with few exceptions, noted that the mobile device afforded them the time to study. They felt for the first time that they had *tiempo para aprender* or time to study.

This case was selected, also, to exemplify some of the challenges participants faced as they struggled to find time in a day structured by their participation in the informal economy and in domestic work. This stands in stark contrast to Cook, Pachler, & Bradley's (2008) study of university students who enjoyed the ubiquity of the mobile device to further explore the connections between formal and informal learning. For the participants in this study, the formal and informal learning barrier did not matter as much as having formal learning opportunities in the context of informal environments. The mobile device facilitated this transaction between formal learning in informal environments.

Learning to text: *Aprender a textiar*. Another feature of the mobile phone that participants reported as valuable to their learning was the SMS or texting features. In the following section Isabel narrated how learning to text not only drove her learning in the mobile program for literacy, but also helped her communicate with her daughter. She found herself using this feature to communicate with her daughter with letters or single syllable words.

Learning to Text: Aprender a textiar-Spanish

Researcher: Usted tenía que mandar y enviar textos, ¿qué valor le da a éso, para usted?

Isabel: El valor era aprender. Aprendí a mandar mensajes porque yo nomás era de mi hija que me decía, "Ya llegué a la casa," (en los mensajes de texto). Y me, le ponía yo, "OK," o "sí." Y

era eso. Y ahorita ya le hablo o le mando un mesaje y le digo, "¿A qué hora vas a venir?" Y eso

es lo que no podía. Nomás le contestaba, "Sí," o "Está bien."

Learning to Text: Aprender a textiar-English

Researcher: You had to send and send text messages, what value did that have for you?

Isabel: The value was learning. I learned to send a text message because it was my daughter

who would tell me, "I'm home," (In her text message). And, I would write, "Ok," or "Yes." And

that was that. And now I either call her or I send her a text message and I tell her, "What time

are you coming?" And that was what I could not do before. I would simple reply, "Yes" or

"It's okay."

As a mobile phone user before her participation in mobile literacy, Isabel expressed

interest in learning more about the functions of her phone, specifically sending text messages.

Through her participation in the mobile phone program, Isabel felt empowered to initiate

conversations with her daughter over text message. She not only responded to her daughter's

text message, but asked questions. Isabel was already actively involved in the life of her

children. For example, in the weekly calls I learned that she visited her son's school every

morning to observe him because his behavior had changed drastically at home. Her daughter

confessed to her on another occasion that her friends had encouraged her to "ditch" school. She

declined because she knew Isabel would be inquiring about her whereabouts. According to

Isabel's account, the mobile phone not only encouraged her acquisition of literacy skills, but also

expanded the avenues of communication with her children. With the exception of non-users (see

Digit-self profiles), participants were eager to adapt texting to their environments. This suggests

that this feature should be further explored for future iterations of mobile learning for this

population. It appeared that for most of the participants, texting held great social currency. Non-mobile users, such as Beatriz, got around using this feature by seeking the assistance of family members and friends. However, in all cases, this mobile phone feature afforded participants a formal learning experience. At the same time, most participants (with few exceptions such as Beatriz) connected their formal learning experiences to informal applications, as observed in Isabel's case.

Language & context-specific curriculum for collaborative learning. In his initial interview, Pepe and others illustrated how formal education had not been a priority. First, he articulated that it was not a necessity or encouraged by parents *en aquel tiempo*. Secondly, his life in the Guatemalan countryside demanded other types of skills such as knowledge about the land and raising animals, which he acquired mostly by working alongside his parents. Lastly, even though he and his wife immigrated to the United States in their later adult lives and had leisure time to dedicate to school, Pepe recalled not finding classes for themselves—classes that addressed literacy in Spanish[39]. In Pepe's case, time was not a factor in attending adult education classes. Instead, he could not find classes to meet his instructional needs. It was not until his daughter-in-law told him about the mobile literacy program in Spanish that he felt encouraged to enroll. Although Pepe did not use a mobile phone before his mobile learning experience, he was motivated to learn more about a device that many around him used, including his grandchildren. In this particular instance, Pepe narrated a motivation to attend adult school, but not really finding anything that was apt to acquire reading and writing skills in Spanish.

Language & context-specific curriculum for collaborative learning-Spanish

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[39] Pepe reported that his first language was Quiché and Spanish a second language. He felt strongly about developing reading and writing skills in Spanish before he pursued other courses of study such as ESL classes.

Researcher: ¿Nunca ha asistido a escuela de adulto?

Pepe: Ya de adulto ya nunca.

Researcher: ¿Y aquí (EEUU) tampoco?

Pepe: Yo estaba pensando ir. Eso me (le) estaba diciendo a mi nuera, "Por favor, mija hacerme

un favor. ¿Dónde podemos llevar (ir) a la escuela?" Porque queremos nosotros ir en la mañana a

aprender algo, verdad, para cómo se aplica uno para un médico, cómo se escribe, ¿verdad?

Porque uno necesita algo, ¿verdad?

Researcher: Sí.

Pepe: Y le dije a mi hija (nuera) y ella se fue a donde usted. Pero no se cómo le dieron el

programa. Nos venimos nosotros aquí a este programa, por mi hija (nuera).

Language & context-specific curriculum for collaborative learning-English

Researcher: You've never attended adult school?

Pepe: As an adult, never.

Researcher: And here (in the United States)?

Pepe: I was thinking of going. I was telling my daughter-in-law, "Please, *mija* do me a favor.

Where can we take [go] to school?" Because we want to go in the morning to learn something,

right, like how to apply for a doctor, how to write, right? Because one needs something, right?

Researcher: Yes.

Pepe: And I told my daughter (daughter-in-law) and she went with you. But I do not know how

she found the program. We came here because of my daughter (daughter-in-law).

As may be evident from his conversation style in Spanish, Pepe's Spanish has some

traces of the structure of Quiché. Spanish was the dominant language in his place of residence in

the United States. Thus, when he talked about finding an adult education class, he struggled to do so because his daughter-in-law could only find English programs. When he heard about a Spanish literacy curriculum over a mobile phone, he agreed to participate. In his interview, he expressed a desire to read and write in Spanish and to learn more about mobile devices. Pepe noted, "También quiero aprender…Nunca yo, nunca he visto yo teléfono que tiene palabras adentro, verdad, porque no lo uso. No sé." He sought the help of his daughter-in-law and grandchildren while he learned to maneuver the texting functions on his own. At the end, he learned how to send his own text messages and studied most comfortably under a shaded tree in his backyard while he watched his grandchildren play.

Participants in this study sought a collaborative learning environment outside of the resources provided by the mobile learning program. Moreover, participants who successfully completed their term of study also had support at home. Unlike the university students in Cook, Pachler, & Bradley's study (2008), for these participants, the tutor support built into the Cell-Ed platform was not enough to provide the "context-aware, timely learning support," (p.17) necessary to keep them engaged. Instead, participants sought help from family and friends. For these participants, having a curriculum in Spanish was vital to establishing a collaborative learning environment at home. The mobile device afforded access to this language-specific and context-specific curriculum since it provided a mobile platform where students worked from home, on their own schedule, and had access to their most trusted social networks. In Pepe's weekly calls, his daughter-in-law was very involved in his progress and his grandchildren provided a great source of motivation for him. Pepe looked forward to his weekly calls with the Cell-Ed team, but it was his support at home that made the difference for Pepe. His daughter-in-law tracked his progress and gave him additional assignments according to his learning

challenges. Thus, Pepe's participation in the adult mobile literacy program was possible because it met his instructional needs in Spanish—which also facilitated his families' "context-aware, timely learning support," (p.17) of his learning. Thus, a consideration of both the language and context specificity of the curriculum preceded collaborative mobile learning.

        Learning as a Pastime: *¡Era cómo un juego!* Participants such as Beto regarded learning over the mobile phone as a pastime. Federico reported that he would replace some of his TV time with the mobile phone program. Beto noted that after a long day of work or facing the stresses of unemployment, *se relajaba* or he relaxed, by participating in the mobile phone program. During his exit interview, Beto explained how he used the mobile phone program.

Learning as a pastime:¡Era cómo un juego!-Spanish

Researcher: ¿Y cómo estudiaba? ¿Quiero que me explique los diferentes aspectos de cómo estudiaba? Por ejemplo, usted usaba el audio…

Beto: Sí.

Researcher: ¿Y luego que hacía con cada lección?

Beto: Lo primero fue bien divertido porque las letras que me mandaban (por el celular) ya las conocía. Pero, éste, después me, me empezaron a mandar más textos (pausa). Dónde fue más interesante, ya donde me mandaban, éste, las, las palabras pegadas y allí ya tenía que mandar los textos. Fue bien interesante. Aprendí bastante—cosas que yo no sabía aprendí.

Learning as a pastime:¡Era cómo un juego!-English

Researcher: And how did you study? I want you to explain the different ways you studied? For example, did you study the audio…

Beto: Yes.

Researcher: And then what did you do with the lesson?

Beto: At first it was fun because the letters I was sent (over the mobile phone), I knew them already. But, well, after I, I started receiving more text messages (pause). Where it became more interesting was where they sent me, well, the words put together and there I had to send the text messages. It was very interesting. I learned a lot—things that I did not know.

For participants, such as Beto, mobile learning afforded them a new perspective on formal learning different from the conflicted experiences in early childhood and adult education. Beto recalled studying for hours at a time because the mobile phone delivery of the lessons almost seemed like a game to him. He noted, "Me agarraba y es que es como cuando está uno así tan entretenido no quiere parar.[40]" While some students, like Marcia, reported cramming their learning late at night, this did not mean they did not see the learning activity as an escape from the long hours of labor or a time for themselves. Such was the case for participants who provided narratives of mobile learning as a *pasatiempo* or pastime activity. Studies that advocate learner-centered affordance of mobile learning also highlight the importance of an engaging or fun learning experience (Sharples, Corlett, & Westmancott, 2002). This was not the exception in the mobile learning experience of the participants in this study. Instead, future iterations of mobile learning for this population should consider this aspect as central to engaging participants whose schedules were severely at the mercy of the labor market and their domestic duties.

Self-study: *Estudiar sin el chavalerío y el anonimato.* In her exit interview, Marisol recalled her favorite feature of mobile learning, *estudiar sin el chavalerío*, or the ability to study on her own without the crowds of a classroom. Other participants reported a similar advantage to mobile learning where they enjoyed not only studying on their own, but also tailoring their own *tarea* or homework according to their needs, many times with the help of their family and

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[40] I would start and it's like when you are like that so involved you don't want to stop.

93

friends. Moreover, others enjoyed the anonymity afforded by the mobile phone in which they did not have to re-live the *vergüenza* or shame they felt when confronted with a situation in which their literacy abilities came under scrutiny, as had been the case with their formal learning experiences. In this example, Federico summarized his study habits.

Estudiar sin el chavalerío-Spanish

Researcher: Ahora quiero que me describa un poco la manera en que estudiaba. Entonces, ¿cómo es que le hacía…?

Federico: Ahm, lo que hacía cuando, lo escribía. Lo escribía, y luego…

Researcher: ¿Entonces marcaba?

Federico: Marcaba, sí.

Researcher: Y luego esperaba el mensaje…

Federico: Espera… hacía toda la hoja y ya cuando terminaba de hacer mi hoja ya me mandaban el mensaje.

Researcher: Entonces escribía una hoja y luego mandaba el mensaje, pero veo que en algunas (lecciones) tiene más de una hoja escrita…

Federico: (En) unas ponía un poquito más…

Researcher: Me acuerdo que a veces me decía (en las llamadas semanales), "Tengo que…" que estaba atrazado en las tareas.

Federico: Ahm, sí. Cuando ponía a veces nomás escribía como media hoja y este, y, y brincaba a otra, pero volvía a poner como media hoja y luego me ponía a hacer la practica que me faltaba un día siguiente.

Researcher: Okay, entonces escribía la mitad…

Federico: No abría el programa, no abría el programa hasta que terminaba todo eso.

Researcher: Okay. ¡Qué disciplina!

Federico: (Risa).

Estudiar sin el chavalerío-English

Researcher: Now I want you to describe for me how you used writing? How did you do it?

Federico: Hum, what I did when, I wrote it. I wrote it and then…

Researcher: So you dialed?

Federico: I dialed, yes.

Researcher: And you waited for the message…

Federico: I wait…I would write the entire page and when I finished writing the page I would send the text message.

Researcher: So you wrote a page and then you would send the text message, but I see that in some (lessons) you have more than one page written…

Federico: [In] some I wrote more…

Researcher: I remember that you would tell me (in the weekly calls), "I have…" that you were behind in your homework.

Federico: Uhm, Yes. When I wrote I sometimes just wrote half a page and then, and, and I jumped to another lesson, but I would return to write half a page and then I would do what was missing as practice the next day.
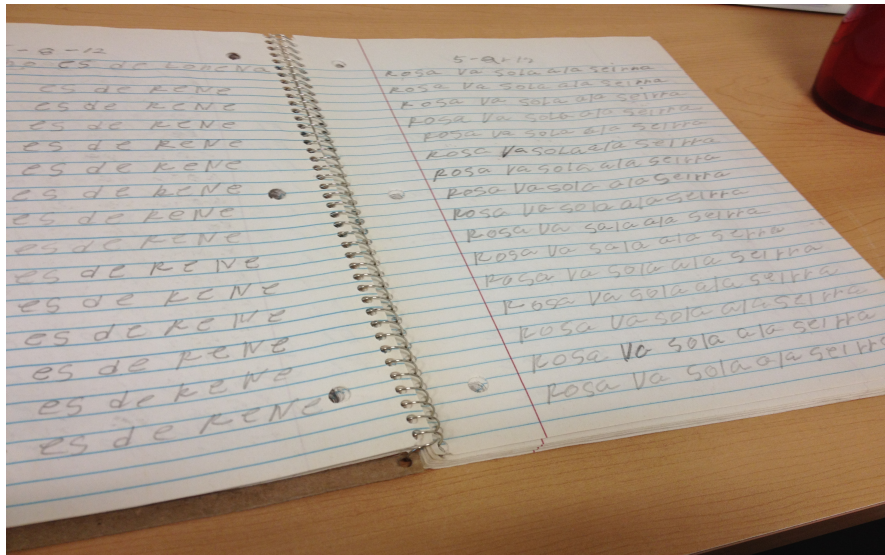
Researcher: Okay, so you wrote half…

Federico: I would not open the program. I would not open the program until I was finished with all of that.

Researcher: Okay. What discipline!

Federico: (Laugh).

Figure 5.1 Participant's writing sample

Federico illustrated a discipline that many of the adults maintained during their

participation in the mobile learning experience. It was a self-crafted study plan that gave them a

sense of pride in their learning. Nonetheless, some participants struggled to maintain this

discipline without the help of their home supports and weekly reminders from the mobile phone

device and the research team. Without exception, participants anticipated their weekly reminders

and their weekly calls from the research team. They reported that these phone calls kept them on

track and represented the conventional teachers' support when they could not find the support

they needed in their family or peers.

Another valued aspect of self-study was the ability to be an anonymous student while

using the mobile phone. In her initial interview Ramíra traced *la vergüenza* or shame she had

experienced as a young lady and now in her adult life. Ramíra reported that the mobile phone

afforded her the privacy and the comfort of studying with those she trusted—for example her

sister, other street vendors, and her grandchildren. Other participants noted that the mobile

phone permitted a certain level of anonymity, and this was valuable to them because, as more than one participant noted, "A nadie le gusta que se rían de uno.[41]" In the following section, Ramíra reminded me of her past experience with la vergüenza as she discussed the value of mobile phone learning.

El anonimato-Spanish

Ramíra: Pues, cuando yo crecí y era una señorita me daba pena. Yo quería…Me daba pena que las demás de mi edad sabían leer y escribir bien y a mi me costaba y yo siempre me hacía a un lado. Yo siempre, prefería no ir a ningún lado pero que no me dejaran en vergüenza y todavía me da me pena que me dicen que lea, o cuando voy al doctor o algo y me dicen, "Ya leyó este," y les digo, "Sí," aunque no lo lea. Por eso he cometido a veces errors por no saber leer.

El anonimato-English

Ramíra: Well, when I grew up and I was a young lady I was embarrassed. I wanted…I was embarrassed that the rest of the ladies my age knew how to read and write well and it was hard for me and I would always step aside. I always, I would prefer not to go anywhere so that I would not be put to shame and I still am embarrassed when people tell me I don't know how to read, or when I go to the doctor or something and they tell me, "Did you read this?" and I tell them, "Yes," even if I haven't read it. That is why I sometimes make mistakes because I do not know how to read.

Avoiding *la vergüenza* through the use of a mobile device proved to be an attractive aspect of mobile learning for many participants. In Valadez & Cajina (2000), *la vergüenza* was confronted directly through classroom dialogue. While the participants of the mobile phone

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[41] Nobody likes being ridiculed.

program relied on their trusted social networks to avoid confronting shame, more information

must be collected to ascertain if simply acquiring more literacy skills also helped students

overcome *la vergüenza* experienced over the course of a lifetime. This aspect is of great

importance in the context of this population because overcoming *la vergüenza*, as discussed by

many of the participants, was crucial to their own self-growth and to changing their self-

perception.

While self-study, including self-monitored learning and enjoying anonymity, was an

affordance of mobile learning to those who completed term of study, the five students from the

case study group who withdrew early could not overcome central challenges. These challenges

included building study habits on their own and finding adequate assistance in their networks to

support technological and curricular aspects of their learning. Other students withdrew early

because they faced health issues and financial hardship that superseded their desire to learn and

participate, reminding us that the affordances of the mobile phone cannot alone compensate for

the extensive effects of poverty on the lives of the participants. The variability of learners was

evident even in this small sample of the participants. Some enjoyed the self-study because they

had the resources at home to support their learning and because they avoided *la vergüenza*

experienced associated with illiteracy. Other participants could not be expected to develop their

own study skills because they did not have the resources or the educational background to

develop these study skills on their own. All around, students enjoyed the affective relationship

developed over the phone with the research team member that monitored their progress. Thus,

another consideration in the future design of mobile learning experience should focus on the

variability of the learner and, consequently, the variability of the supports in the mobile learning

design.

Conclusions

This was an analysis of the situated affordances found in the context of immigrant Latina/os adults acquiring basic literacy skills over a mobile phone. One of the main characteristics of mobile phone usage among this population was the precarious access to mobile devices. While 67% of the participants reported having mobile device, in the course of their participation I learned that this access was shared with other family members and tied to the financial fluctuations of the household. Nonetheless, most participants found many uses for the mobile phones in their daily activities. For owners, it became a financial priority to make their mobile phone payment when it was possible. Through their participation in mobile learning, mobile phone users found *new* utilities to their mobile phones. For example, Isabel added texting to the communication modalities she used with her children and Beto used the mobile phone to secure employment as a day laborer. In addition, participants experienced the mobile phone as a learning device for the first time. Even non-mobile phone users, such as Beatriz, recognized advantages to using a mobile device in formal learning.

These mobile devices afforded participants *tiempo para aprender* or time to learn which differed from Cook, Pachler, & Bradley's (2008) discussion of formal and informal learning. In this context, participants were concerned with the viability of learning as they struggled for their livelihood in an informal economy. Thus, access to formal learning in informal settings such as the bus stop, the park, and the home was much more important to the participants than bridging their formal learning to those settings. Future design of mobile learning should consider more design-based connections between these two settings because students were not always concerned with establishing these on their own. For example, in a home visit with Beatriz, I asked her to identify the letter she studied in her own home. The certificates, maps, and prayers

99

that covered her walls were examples of letters she wrote in her notebook. Yet she was not making that connection on her own. Instead, she seemed puzzled by my request.

In addition, participants reported that the mobile learning experience also afforded them with a language and context-specific alternative not found in their immediate environments. The language and context-specific curriculum facilitated collaborative learning with family members and friends. Nonetheless, participants who did not make use of their familial networks were also the ones who withdrew early. Moreover, the familial supports relied on the research team for advice and teaching tips, either over the phone or in person. This suggests that mobile learning also depended on a source of "expert" advice easily accessed by families.

Different from previous experiences in formal learning, the participants incorporated mobile learning a *pasatiempo* or a pastime activity. Although their day was fraught with labor demands, they managed to schedule mobile learning during their free time. They did this because they found an element of fun in the mobile learning experience. Lastly, the participants narrated their participation as self-monitoring learners. The mobile phone enabled participants to craft their own study plan, moving through the lessons at their own pace and with their own practice. As discussed by Sharples et al., (2002), the mobile phone afforded this epistemic shift in the way participants experienced formal learning. The delivery over the mobile device situated participants at the center of the learning activity where they took charge of their learning with the help of their social networks. However, other aspects of the delivery re-constructed a teacher-driven experience. For example, the audio recordings delivered to students with the text-lesson simulated a teacher-centered delivery of instruction. In addition, the mobile learning program's design restricted participants' communicative capacities to interactions between platform and student. Future design should consider connecting learners to each other in order to

fully exploit the communicative capacities offered by a mobile device and also to more directly

aid participants in overcoming the *vergüenza* they experience around their peers.

The study of mobile learning affordances for this population must also consider the

variability among learners. While some participants thrived in an environment where they could

learn at home and with family, others, such as the participants who withdrew early, did not fare

as well. They reported that not having support at home and feeling further isolated them from

their peers. Moreover, these participants did not readily adapt their own study skills. For these

students, the mobile learning experience was antithetical to a pastime activity. Instead, they

experienced it as burdensome and an added layer to their already saturated workload.

CHAPTER 6

THE IMPACT OF MOBILE LEARNING

Introduction

The mobile phone literacy program piloted in Los Angeles was a modified version of

Leamos™. At its core, *Leamos™* was founded on the principle of an ideological orientation to

literacy (Street, 1984). In "Redefinitions and identity: Lessons from Critical Basic Literacy

Programs," Valadez and Cajina (2000) defined the goals of *Leamos™*. Specifically, they asked

if critical pedagogy can "help working class adults better understand their own circumstances

and possibilities as they introduce themselves, and their children, into U.S. society." In addition,

the authors analyzed students' written accounts to ascertain the impact of literacy acquisition.

As was also evident in Rogers' (2004) study, Valadez and Cajina (2000) found that students re-

articulated their identities through their narratives. The authors found evidence of: 1) the

recognition of elements that caused their troubles, 2) the recognition of strengths, 3) pride in

themselves and in their ability with literacy skills, and 4) the analysis of the options in situations.

These four elements structured the participants' re-articulation of self in their narratives.

Similar to the work of Valadez and Cajina (2000), this chapter discusses the impact of

mobile literacy on participants' re-construction of what Rogers (2004) termed "productive

literate selves." Different from Valadez and Cajina (2000), these narratives were shaped by an

experience of literacy and mobile learning in an exploratory stage. The pragmatic considerations

of an evaluation study limited the scope of the ideological applications of literacy instruction.

For example, students who participated in *Leamos™*, either in the traditional or computerized

classroom, participated in discussions and workshops that drew on the ideological aspects of

literacy acquisition. These participants had the option of attending a class setting that used a

dialogical approach to instruction (Valadez and Cajina, 2000). However, the participants in the mobile platform did not have this option.

Instead, Freirean-centered lessons were delivered to participants over their mobile device with less attention paid to participants' and families' orientation and training in an ideological approach to literacy. The mobile experience of literacy differed in more ways than the delivery of lessons over the mobile phone. In this chapter, my analysis of the impact of mobile technology will focus special attention on the participants' reconstruction of literate selves (Rogers, 2004; Valadez & Cajina, 2000), following their participation in mobile literacy. After presenting these narratives, I will describe the limitations of mobile learning, and the implications for future iterations of ABE and mobile learning. In many ways, the limitations discussed reflect the different pedagogical experiences of participants enrolled in mobile learning and those enrolled in *Leamos™*.

Discrepancies between Mobile Learning Design and Pedagogical Aims

Chapter 4 discussed participants' lived literacies and their perception of basic literacy skills. The participants reported seeking out basic literacy skills because they associated literacy with *el ser alguien,* or being someone, with more efficacious participation in interdependent social network arrangements, and with overcoming *la vergüenza,* or the shame of illiteracy. In all, they associated their participation in formal education with tangible aspirations such as better employment opportunities and with the ability to fill out institutional paperwork. In addition, they also sought intangibles such as human dignity and respect from their peers.

Participants' educational aspirations came into contact with an exploratory version of mobile learning that did not specifically address the ideological aspirations of the participants. While *Leamos™* promoted critical agency in its students, the mobile learning platform did not

fully adapt this aspect of the literacy curriculum. For example, in the original design of

Leamos™ teachers were trained to use generative words, co-construct the curriculum with

students, and maintain dialogue around political awareness. These conversations helped students

overcome legal and financial obstacles and develop a home-school relationship in children's

education (Valadez & Cajina, 2000, p. 180). However, only the most basic of these strategies

(e.g. generative words) made it into the mobile phone iteration.

Thus, while the use of generative words was embedded into the mobile platform, other

aspects, such as the training in ideological approaches to literacy for participants, peers, and

researchers did not factor into the exploratory design. From its beginnings, the practical

consideration in the initial mobile learning platform rendered a pedagogical experience different

from the experience of the students in *Leamos™*. The limited incorporation of the ideological

aspects of literacy acquisition will be discussed in the final sections of this chapter. However, I

highlight this discrepancy because it is important to keep in mind as I develop the analysis in the

following sections.

Mobile Learning and a Reconstruction of Literate Selves

Although this experience differed from the one of students in *Leamos™* (Valadez &

Cajina, 2000), evident in the narratives of the participants was also a re-construction of

participants as literate selves, present in the work of Valadez & Cajina (2000) and Rogers

(2004). In the framing of these narratives I highlight the agentic role of the participants in

fashioning their identity as literate selves. The process of self-authoring encouraged participants

to organize, represent, and constitute their reality (Bruner, 1991, p. 5). In other words, as they

wove their narrative they also represented themselves as agents. For Zamora-Hernandez (2010)

self-authoring in itself did not constitute an act of agency. Instead, he argued: "…people

appropriate practices and discourse to understand their lives and define themselves without

seeking to question power relationships at a large scale…" (p. 65). In order to honor the agency

found in these narratives, I have turned to a definition of agency that understands the

marginalized as active participants in the creation of life histories (Rogers, 2004; Valadez &

Cajina, 2000). Different from Zamora-Hernandez (2010), acts of liberation and subjugation may

be structured by institutional forces yet ultimately participants consented to and/or contested

these power relationships (Ong, 1987; Pérez, 2003). Thus, using this definition of agency where

participants ultimately act and invent themselves, I analyzed the impact of mobile literacy

instruction on participants based on their accounts of literate selves.

   ***¡Sí se pudo!*[42]** With the exception of the five students who did not complete the mobile

phone instruction program, the participants reported a perceived growth in their reading abilities.

For example, Marisol made her own lists before she left to the grocery store without the help of

her husband. Others felt more confident in settings and activities with high literacy demands

such as bible study, ESL classes, helping children with homework, reading street signs,

advertisements, and newspapers, and participating in community organizations. In general,

participants reported gaining letter recognition and decoding skills, but they identified a need for

further development of these literacy skills via additional formal instruction and practice. Marcia

illustrated this need in her interview over the phone:

¡Sí se pudo!-Spanish

Researcher: En su vida diaria, okay, ¿en que cosas está usando la lectura?

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[42] ***Yes, we could!***

Marcia: Mmm, este…

Researcher: ¿Qué cosas puede hacer ahora con lo que está aprendiendo que antes no podía hacer? Puede leer…

Marcia: Juego con las letras.

Researcher: Aham, ¿Qué hace con las letras?

Marcia: Aham, las veo bien como va escrito en la libreta.

Más tarde…

Researcher: Ahora, ¿qué otras le gustaría aprender ahora que ya ha termindo con el programa de Cell-Ed?

Marcia: ¿Cuál sería… (risa)

Researcher: ¿Hay otras cosas que le gustaría aprender?

Marcia: Mhem, pues sí para leer, correguir las letras.

Researcher: A ver. Deme un ejemplo…

Marcia: Aham…

Researcher: ¿Cómo dice? Correguir la letras, ¿cómo?

Marcia: O sea saber escribir bien, bien. Pues completa las letras porque a veces me como las palabras o le faltan [letras]. No dice lo que es [la] las letras…

Researcher: Okay, in your daily life, how are you using reading?

Marcia: Mmm, well…

Researcher: What things can you do now with what you learned that you could not do before? Can you read…

Marcia: I play with the letters.

Researcher: Aham, What do you do with the letters?

Marcia: Aham, I pay attention to how they are written in the notebook.

Later…

Researcher: Now, what other things would you like to learn now that you have finished the Cell-Ed program?

Marcia: ¿What would that be…(laughs)

Researcher: Are there other things you would like to learn?

Marcia: Mhem, well yes, to correct, to correct the letters.

Researcher: Let's see. Give me an example.

Marcia: Aham…

Researcher: ¿What do you mean? Correct letters, how?

Marcia: I mean to write well, well. Well, I mean complete letters because sometimes I skip the words or I am missing [letters]. It does not say what it is, the letters.

Marcia reported feeling more confident in her reading and writing skills and, as the interview progressed, she revealed that she felt confident reading her notebook and in her text messages from Cell-Ed. However, she felt she needed more learning opportunities to grow in the production of her own writing. While students who completed the mobile instructional program identified an elevated confidence participating in literacy activities and practices they feared or avoided before, they generally felt concern with the productive aspect of literacy, specifically their own writing. Moreover, as they narrated their literate selves, they represented themselves as capable participants in literacy activities and practices where they had not before, and they recognized areas for further growth, specifically improving their writing. In another instance, Humberto shared a literacy metaphor where he described his situation as one where he lived in a state of blindness because he could not participate in literacy events, even for his most immediate needs (e.g. getting around the city). In the interviews, participants who completed the program shared a renewed sense of self-confidence and hope. They all seemed to echo a *¡sí se pudo!* in their narratives of literate selves. This confidence stood in contrast to the stories in their initial interviews, and instead conjured a sense of optimism about their future as literate selves and in their general livelihood.

Quisiera aprender, aprender más, todavía más…[43] A significant amount of research provides insights into the importance of identifying oneself as a learner in order to reach academic goals (Gee, 2000; Ogbu, 1992; Nieto, 2005). In this case, it was important that

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[43] I would like to learn, learn more, even more…

108

participants recognize themselves as capable learners to become successful readers. The mobile

phone literacy program provided students with an opportunity to engage in learning, in the face

of many obstacles encountered by working class immigrants in the United States. This was one

of the few learning opportunities they had in their history of participation. Beto noted that in his

first weeks of participation he had not held a pencil in 25 years. He stated:

> … ya tenía mucho que no, que no agarraba un lapiz. Como unos 25 años que no, que no agarraba un lapiz…Mis manos estaban un poco torpez. No, éste, no, no, no, éste hacía las letras un poquito mal y como que sentía duros mis dedos para seguir haciendo y me recordo cuando yo fui a la escuela siempre con esa hambre de aprender[44].

In his narrative he provided a powerful imagery of his limited engagement with writing practices

over the years. Moreover, Beto's illustration expanded on the notion of motivation and identity

as learners by underscoring the role of the body (Buter, 1990), in this case the hands, and the

dexterities associated with learning and envisioning oneself as a learner.

In another interview Marisol exclaimed enthusiastically:

> ¡Claro de que aprendí a escribir! y que esta cosa, parece mentira, pero si aprende. Y yo no le tenía, cuando yo vine yo no tenía fe, pero dije, "Voy a probar." Y sí, me alentó a mi bastante para...porque yo voy a seguir[45].

Like most of the participants, Marisol explained a reluctance to see herself as an able learner

before her experience with mobile learning. However, in her exit interview she was convinced

that she was an able learner and that she would continue learning. Similarly, Ramíra's narrative

unfolded with other learning goals she had for herself.

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[44] … It had been a while since I grabbed a pencil. About 25 years that I did not, that I did not hold a pencil. My hands felt a bit clumsy. I did not, well, did not, did not, well I wrote the letters badly and it was like I felt my fingers too stiff to continue doing and it reminded me of when I went to school always with that hunger to learn.

[45] Of course I learned how to write! And this thing, it seems unlikely, but one does learn. And I did not have, when I came (for the first interviews), I did not have faith, but I said, "I am going to try." And yes, it inspired me a lot to…because I am going to continue.

Quisiera aprender, aprender más, todavía más…-Spanish

Researcher: ¿Qué otras cosas le gustaría hacer o aprender…?

Ramíra: Me gustaría aprender las cuentas. No se aprender a hacer bien. Todavía quisiera aprender más, todavía más para que, no sé…

Researcher: ¿Más que?

Ramíra: Más lectura. Quiero aprender una bonita letra. Y que escriba yo bien las letras como son. Que no me digan mis nietos, "Esa no va, abuelita. Te faltó…"

Researcher: ¿Qué otras metas o sueños tiene usted?

Ramíra: No sé. Ya estoy grande pero yo quisiera aprender bien a leer y después aprender el inglés…

Quisiera aprender, aprender más, todavía más…-English

Researcher: What other things would you like to do or learn…?

Ramíra: I would like to learn to do arithmetic. I did not learn how to do those well. I would still like to learn more, sill more so that, I don't know…

Researcher: More of what?

Ramíra: More reading. I want to learn to write nicely. And that I write those letters as they are. That my grandkids don't say, "That one does not go there, grandma. You are missing…"

Researcher: What other goal or dreams do you have?

Ramíra: I don't know. I am an older person, but I would like to learn how to read well and then learn English…

Thus, students who completed the mobile learning program shared a sense of accomplishment that made it possible for them to identify as learners. They all shared many educational aspirations, including developing their writing skills in Spanish and English literacy. In addition, students wanted to participate in computer classes and vocational courses.

Reinforcing social networks. As an observation, I noticed that many of the students sought assistance with either the technical or educational aspects of the mobile phone program from researchers and, more importantly, their social networks. As demonstrated in Table 6.1, participants made different uses of this assistance depending on their needs, the availability of a social network, and whether they felt supported in their learning goals. Ana, for example, represented a student with minimal supports. She did not seek a tutor or her social networks to assist her in using the mobile learning program. In the end, she did not complete the program and found mobile learning incompatible with her learning style. In another example, Marisol informed me in her initial interview that she did not feel the mobile phone was a learning platform for her. As she participated in mobile learning, she sought out tutor support and her social networks. However, once she had mastered the learning platform, Marisol reported preferring the self-initiated and self-paced options of mobile learning. On the other hand, Pepe made use of his tutor and social networks, yet reported a continued motivation from the tutor and social networks even as he learned to use the mobile phone platform on his own. Thus, Table 6.1 provides a glimpse of the diverse manners in which participants incorporated assistance and their social networks into their experience of mobile learning.

Table 6.1 *Assistance and social networks*

Participant	Tutor Assisted	Social Network Assisted
Anita	N	**Daughter**- Accompanied her to the first interview and sat in my demonstration of the use of the mobile program. Single mother with full-time employment. She was strapped for time and did not have time to help her mother, although she had every intention during the initial interview. Anita did not think the tutor over-the-phone support was a good fit for her.
Marisol	Y	**Husband**- Accompanied her to her first interview. Sat in with Marisol as I was explaining the use of the mobile phone program. In the beginning his assistance was critical to facilitate her learning. She would call for tutor assistance when he was at home. He would work with me to trouble shoot and assist her at home over-the-phone. At the end Marisol was proud to report, "Ya lo hago yo sola. ¡Nadie me ayuda!"
Pepe	Y	**Daughter-in-law and grandchildren**: She accompanied him to his first interview and was present when I demonstrated the use of the mobile phone program. At home daughter-in-law managed his learning keeping track of progress and the grandchildren assisted with the mobile phone functions. Pepe reported studying without assistance towards the end, but relied on my weekly reminder calls and the encouragement of her daughter-in-law to motivate him.

Consequently, reinforcing social networks became a potential effect for participants who completed the program. For example, Beto, in his initial interview, expressed much resentment towards his mother for not assuring that he completed his primary education, and instead made him follow the advice of his stepfather to have Beto work with him at his carpentry shop. Beto

112

retold:

> Mi mamá me metió a la escuela a la edad de los 10 años. De allí que fui a la escuela
> mi amá se junto con una persona, con mi padrastro. Y allí, este, nomás fui hasta el primer
> año. Para el segundo año ya no se pudo porque me sacó mi amá de la escuela porque le
> hizo caso a mi padrastro. Y de allí ya me quedé como quien dice. Me ya no, no, no
> pude aprender[46].

During his participation in the mobile phone program, Beto had assistance from his mother.

When I asked how his mother felt about him completing the mobile phone program, Beto noted:

> A ella le dio mucho gusto porque me miraba, como, como [inaudible] que llegaba así
> todo cansado y me ponía siempre a estudiar…Ella me motivó bastante[47].

In his final interview he recalled his mother saying to him, "Dispénsame, hijo. No sabía cuanto

mal te estaba haciendo." [I'm sorry son. I did not know how much harm I was causing you.]

Along with a renewed sense of confidence in himself as a learner, Beto also found an ally in his

mother, whereas in his first interview he expressed resentment against her for not sending him to

school in early childhood. Lastly, and as noted in the work of Valdés (1996), *consejos* were

salient in the interviews. Beto's mother would remind him to be patient when he was frustrated

with a lesson. She would tell him, "*No le hace, mijo. Luego lo haces"* or "It doesn't matter. You

will get back to it later." He reported that one of the biggest lessons he learned was to be patient

with himself. When he got frustrated, Beto would take his mother's advice and return to the

lessons with a clear mind. Thus, participants like Beto found an opportunity to reinforce their

existing social networks and leveraged the *confianza,* or the trust, of these relationships to build

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[46] My mom enrolled me in school at 10 years of age. From there on my mother got together with
a person, with my stepdad. And there, well, I just went until first grade. In second grade it was
not possible because my mom pulled me out of school because she listened to my stepdad. And
from then on I was stuck, as it is said. Already, I could not, could not, could not learn.
[47] She was very happy because she saw how (inaudible) that I arrived very tired and that I would
get to my studies…She motivated me a lot.

their identity as learners. While tapping into their familial networks as learning resources, participants prepared themselves to be more efficacious participants in the interdependent arrangements of the household. For example, Beto reported more effectively communicating with his mother and family members not just about his learning goals, but also about helping others with their own learning goals.

The Constraints of Mobile Learning

Y sigue la lucha…[48] In this case study, five of the fifteen participants did not complete the mobile phone program. Some students did not find mobile learning compatible with their needs as learners. Others had a hard time finding the necessary support at home and others simply could not find a place for learning in the midst of financial or health crises. In this section, I address some constraints of mobile learning and of critical literacy pedagogies, such as *Leamos*™, discussed in Valadez and Cajina (2000).

El incognito[49]. In our initial interview Federico explained that he had kept his "illiteracy" to himself and had not shared his story with his children—adults who are professionals. His wife, his close ally, helped him keep his secret.   In his exit interview, Federico confessed, "Yo sigo todavía incognita." [I am still incognito.] Although he had completed the mobile literacy program, something he regarded as impossible at the beginning, Federico did not feel prepared to tell his children. In the end, Federico did not make an appearance at the graduation ceremony held for the participants and their families, although he had agreed to come and had transportation. Thus, completing the mobile phone program may have been both an

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[48] And the struggle continues…

[49] The incognito.

114

accomplishment, and a cause for *vergüenza*. In Valadez and Cajina (2000), the students in the classroom confront the stigma of *analfabetismo,* or illiteracy, through open dialogue with their teacher and classmates. No such component was evident in the mobile phone program. Consequently, the stigma of *analfabetismo* was in many ways unaffected and perpetuated, as students found comfort in *el anomimato,* or anonymity.   In future iterations of the mobile phone program, this aspect should be addressed through dialogue or support groups that aid students and their families in overcoming the stigmas associated with *el analfabetismo,* similar to those in place for students in traditional and computerized versions of *Leamos™*.

¿Qué está pasando en mí?[50] In her weekly check-ins, Anita reported not being able to access the program because she relied on her daughter to assist her with the program. Anita's daughter, in turn, had been busy with her child going back to school and with her own work demands. Consequently, Anita's studies at home suffered or did not materialize. In the end, she decided to withdraw from the program because she did not feel she had the support at home and she also faced mental health issues. As with her earlier experience with adult education in the United States, she felt that the lessons were triggering her anxiety and schizophrenia. Anita felt the mobile experience of learning was not enough for her because she did not feel support from her daughter and because she was not processing the lessons on her own. Anita closed her interview by describing the mobile experience as another disillusioning one. She argued, "Si yo ya tomé unas clases por celular y no funcionó, que es lo que esta pasando en mí? [51]"

Besides developing discreet literacy skills in Spanish, Centro Latino for Literacy's main objectives in literacy development were to underscore the systemic barriers that structured the

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[50] What is happening in me?
[51] If I already tried this class over the mobile phone and it did not work, then what is happening with me?

students' opportunities, including access to education, through classroom dialogue (Valadez &

Cajina, 2000). Cajina, the instructor and curriculum designer, highlighted the co-construction of

the curriculum as a vital component of conscientização (Freire, 2007). Moreover, through

dialogue Cajina was careful not "…to create the expectation that literacy would be the panacea

to all of the students' problems," (p. 184). These elements were missing from the mobile phone

program. Anita concluded the program feeling defeat and as if something were wrong with her.

She did not have the opportunity to discuss with others in her same situation the common stories

and the social constraints that framed her as "the problem." More consideration should be given

to the ideological dimensions of literacy development in the future development of mobile phone

literacy.

Conclusions

In the work of Valadez and Cajina (2000) the authors cite the work of Rosario

Castellanos, a Mexican novelist and literary critic who underscored the importance of "inventing

oneself." In *El eterno femenino* (1976), Castellanos argued, with regard to women's role in

society:

> It is not enough to adapt to a society that changes superficially, while its roots remain the
> same. It's not good enough to imitate the models proposed for us that are answers to
> circumstances other than our own. It isn't even enough to discover who we are. We have
> to invent ourselves, (as cited in Valadez and Cajina, 2000).

Castellanos posits that the possibility for social change occurs when we reinvent ourselves as

historic actors. The participants in the mobile literacy program encountered this possibility for

reinvention through their participation in formal learning and through the interview process, also

studied in Rogers (2004) and Valadez and Cajina (2000). Participants reinvented themselves as

learners, capable of learning outside a formal classroom setting. Different from their initial

116

interview, participants were convinced that they could learn through a mobile phone device and they envisioned themselves as learning over the course of a lifetime, if given the opportunity. Moreover, the interview process acted as a space where participants could articulate their history of participation in education and position themselves as learners who faced many obstacles, structured by poverty. In this sense, the interview process was an opportunity for participants to reinvent themselves, in contrast to the pre-constructed representations of them as *analfabetas* encountered throughout their lives. While participants reported positive outcomes from their participation, future iterations of this curriculum and mobile learning should consider the ideological elements of literacy development in their design. This consideration in design matters in order to meet the pedagogical aims of *Leamos*™ and to better address participants' aspirations, as noted in their narratives.

CHAPTER 7

CONCLUSIONS

The study was one of the human experience and adult literacy in an age of mobile learning. The cross-sectional case analysis of 15 immigrant Latina/o adults explored the situated affordances of mobile learning for adults acquiring basic literacy. Situated affordances referred to the study of contextualized capacities of new technologies (Gibson, 1979; Gomez, Gomez & Gifford, 2010; Mynatt et al., 1998; Zywica, Richards & Gomez, 2011). Consequently, participants' prior experiences and perceptions of both literacy and mobile learning were central to this analysis. The narrative style framed the findings because I strove to underscore the human aspect of education, literacy, and mobile learning. Moreover, narratives privileged participants' experiences and perceptions. Lastly, this study aimed to uncover the affordances of mobile learning within the historic and contextualized histories of a marginalized group— immigrant Latina/o adults in the United States acquiring school-based literacy.

In order to situate the affordances of mobile learning in reference to participants' history and place, this work explored their histories of participation and the narratives of literate selves (Rogers, 2004). The term *lived literacies* captured the contradictions between literacy as theory and literacy as a human experience. Moreover, lived literacies acknowledged the primacy of participants' experiences to a study of mobile learning. Through their narratives, I found that school-based literacy represented a source of hope, opportunity, dignity, and self-reliance for participants while also serving as a source of *vergüenza,* or shame, that framed their identities as learners and productive members of society. Participation in mobile learning was founded in their aspirations as learners, workers, and members of different social networks. In the following sections I summarize the findings on situated affordances of mobile devices for this population

of immigrant Latina/o adults. Next, I discuss the methodological, programmatic, and pedagogical implications of this study. I hope that this discussion will be fruitful for future research in mobile learning, for organizations and programmers of other iterations of mobile learning for ABE, and for practitioners inquiring about the possibilities and constraints of mobile devices in education for emergent readers. Lastly, I underscore the importance of including the experiential knowledge of marginalized communities in both the study of literacy and the generation of theory in mobile learning. Research communities have too often overlooked marginalized communities—even as theory is constructed about them (see Spivak, 1988). In the field of Education, the generation of theory around an assumed normalized population (Gutierrez et al., 2009) has narrowed perceptions and educational practices to the detriment of marginalized groups. Thus, I conclude with the implications of including marginalized communities as new fields of study emerge and generate theories about learners and their interactions with new technologies.

Summary of Findings

The situated affordances evident in these narratives extend our understanding of mobile learning for immigrant populations developing native language literacy. As argued earlier, many of the epistemic affordances found in the study of mobile learning consider the experience of either K-12 and/or university students with high-end mobile learning devices (see Cook, Pachler, & Bradley, 2008; Hanewald & Ng, 2011; Sharples et al., 2002). Unlike the majority of studies that have explored the affordance of mobile technologies, this study observed the use of low-end mobile devices owned by participants in the development of basic literacy skills. Distinct differences can be gleaned from the narratives of immigrant Latina/o adults who were also emergent readers in their native language. For instance, one of the main characteristics of

119

mobile phone usage among this population was the precarious access to mobile devices. Second, the device afforded participants *tiempo para aprender,* a language and context-specific learning opportunity, a *pasatiempo* or a pastime activity and helped them develop themselves as self-monitoring learners.

The mobile device afforded participants *tiempo para aprender,* or time to learn, which differed from Cook, Pachler, & Bradley's (2008) discussion of mobile phones as a potential bridge between formal and informal learning in the case of university students. According to Cook et al. (1998) the mobile device afforded these learners opportunities to connect what they learned in a classroom setting to what they experienced in real-world settings. While this may matter to most learners, in the case of the participants in this study, preoccupied with the viability of learning as they struggled for their livelihood, what mattered most was the access to formal learning in their informal settings (e.g. a bus stop, a park, and their homes).

While this suggests that participants valued the flexibility of formal learning in the context of informal settings, some of the interviews suggested that the connections between the formal learning on the mobile phone and the real-world settings did not necessarily happen on their own. For example, in an observation Beatriz was asked to identify the places within her immediate environment in which she observed the letters she was learning in her lesson. This did not appear to be a regular practice for her, since she was not sure how to go about this. It was after I provided scaffolds for this activity that she made these connections between her formal learning and her informal environment. As in Cook, Pachler, & Bradley (2008), it will be important to consider how to make the connections between formal and informal learning more explicit for adults learning through a mobile device.

In addition, participants reported that the mobile learning experience afforded them with a language and context-specific learning alternative not found in their immediate environments. The language and context-specific curriculum facilitated collaborative learning with family members and friends. Importantly, participants who did not make use of their familial networks were also the ones who withdrew early. Moreover, the familial supports relied on the research team for advice and teaching tips, either over the phone or in person. This suggests that mobile learning also depended on a source of "expert" advice, easily accessed by families. Another imperative feature of mobile learning design should grapple with how to best incorporate remote tutors/teachers to guide student learning.

In contrast to their previous experiences in formal learning, minimal as they were, the participants incorporated mobile learning as a *pasatiempo,* or a pastime activity. Although their day was fraught with labor demands, they managed to schedule mobile learning during their busy schedule. They did this because they found learning engaging via the mobile learning experience. My findings suggest the participants "fit" mobile learning into their busy schedules because they found an element of fun in the mobile learning experience. It appears that in a similar way to video games, the mobile phone provided participants a unique learning opportunity. In *Situated language learning: A critique of traditional schooling*, James Gee (2004) discussed the ways in which *good* games facilitated learning. According to Gee (2004), game design depends a fundamental learning principle:

> In a good game like *RoN* there is never a real distinction between learning and playing…There is one crucial principle that all good games incorporate that recognizes that people draw deep pleasure from learning and that such learning keeps people going (p. 71).

121

Participants also drew comparisons between mobile learning and games, and their comparisons extend specifically to the affordance of being able to advance from lesson to lesson. Like game playing, the mobile literacy approach reinforced success with advancement to the next level. Participants reported being eager to advance to the next lesson and drew pleasure from the congratulatory messages sent to them when they successfully completed a lesson. The design and support of mobile learning platforms should consider the gaming aspects of learning.

Lastly, participants narrated that mobile devices prompted them to be self-monitoring learners. The mobile phone enabled participants to craft their own study plan, moving through the lessons at their own pace and with their own practice. As discussed by Sharples et al., (2002), the mobile phone afforded this epistemic shift in the way participants experienced formal learning. The delivery over the mobile device situated participants at the center of the learning activity where they took charge of their learning with the help of their social networks and tutors. The design of mobile learning should also explore how to support the self-monitored learner and his/her learning goals.

Implications

In this section I summarize the implications for researchers, programmers and practitioners. In each sub-section I also elaborate on the methodological, programmatic, and pedagogical considerations for future work in mobile learning and ABE. I hope that this research brings to the forefront the importance literacy as a humanizing experience. In developing this discussion, I also place this research aim at the center of the discussion.

Implications for research. After considering the situated affordances of mobile learning for Latina/o immigrant adults developing school-based literacy, it became apparent that research design and theory about mobile learning should depart from the particular experience and

perceptions of learners. Future research should investigate how the affordances of mobile learning depend on, and shift according to, the user. Moreover, this study underscored that learners also had a story to tell—a story that enriched the study of mobile learning. Lastly, the participants in this study were all members of a community of learners, marginalized in the study of mobile learning. Theory about mobile learning should also include the important knowledge base found at the margins, all too often overlooked in research.

Methodological limitations. Due to practical considerations, I played multiple roles as both an employee for Cell-Ed and at the same time as researcher. While these multiple roles enabled my observation of participants in different settings (e.g. community centers, local events, telephone calls, home visits), the same proximity to the participants and the setting occasionally diverted my attention from the "big picture" of research and the design of my study. This methodological limitation inhibited a more purposeful study design and, at times, diverted my attention from my own study of the humanizing aspects of literacy. For example, it was difficult for me to anticipate changes to the interview protocol—as they pertained to the human aspects of literacy—because I was caught up in other aspects of the exploratory research. Future research should consider how being part of multiple facets of exploratory research (e.g. design and teaching) may enable the researcher's full participation in the immediate tasks, while at the same time obstructing the researcher's focus from the long-term research goals.

Implications for programmers. In Gomez, Gomez and Gifford (2010), the authors argue for the importance of explicit design of educational innovation. Moreover, they discuss three elements that advance explicitness about educational innovations—clarifying intended utility, specifying target audience, and continuous measurement. Throughout this work, I underscore the importance of a context-specific study of mobile learning. I argue that

explicitness about educational innovation should be grounded in the experience and perceptions of the students. Thus, conversations about intended utility and continuous measurements should fundamentally take into account the educational aspirations of the specified target audience.

In the context of this study, it is also important to understand educational innovation as a process. In this regard, Gomez et al. (2010) noted: "Bringing innovation to scale is a process. The goal should be not to reach a static end-point but rather to develop a set of tools and strategies that allow for continuous process improvements," (p. 3). The findings of this study focused on participants' experiences and perceptions of a mobile learning project in its initial iteration. These findings support the importance of context to the future of mobile learning and provide insight into the tools and strategies to serve in the continuous process of educational innovation for groups marginalized in the study of education and technology (See Margolis, 2008). While some of the current epistemic generalizations about mobile learning deserve more attention in the study of marginalized groups, it was also evident that a study of Latina/o immigrant adults, not often included in the study of mobile learning, expanded the understanding we currently hold about mobile learning and its epistemic affordances. This study demonstrated that a context-specific understanding of affordances enriched what we know about educational innovation for a particular group. Further, it challenged and extended what we understand by educational innovation, for whom and for what purpose.

Programmatic limitations. In this study, the design was limited to the practical considerations of an exploratory study. Thus, there are many aspects of design left unexplored. An important inquiry for future research would be to ask design questions based on the life experiences and the perceptions of this group of learners. Additionally, these questions about design would also tap into critical literacy and the humanizing character of learning. For

124

example, can critical literacy happen over a mobile phone? Some considerations include exploring the communicative aspects of mobile devices to connect learners in dialogical discussions about their learning experiences and their histories of participation in literacy. Rogers (2004) and Valadez and Cajina (2000) underscored the interactive part of learning that facilitated empowered adult learners to re-invent themselves. In these instances, learning to read took on a transformative character that went beyond phonemic awareness and also shaped adults' identities as learners. How can the design of mobile learning emulate this interactive and transformative experience for adult learners?

At UNESCO's Mobile Learning Week (2013) scholars, designers and social entrepreneurs widely discussed the communicative aspects of mobile devices and learning. This aspect was not fully explored in the design of the exploratory study. However, it is worth considering for these participants. Specifically, participants in this study had a difficult time grappling with the social stigmas of *ser analfabeta/o,* or being illiterate. Connecting learners and the learning community to each other would fully exploit the communicative capacities offered by a mobile device while also providing an opportunity for participants to grapple with the *vergüenza* in a community of learners. This proved to be a successful exercise in Valadez and Cajina's (2000) work with Latina/o immigrants developing literacy in the classroom.

Implications for practitioners. In the end, the retention of participants in the mobile literacy program depended highly on the ability of adults to customize their learning—using their social networks. However, of the 15 participants included in this analysis, five withdrew early from the mobile literacy program. This attrition rate was explained, in part, by personal circumstances such as health issues. In addition, these participants differed from the other participants because they did not feel effectively supported in their learning goals by their

125

support networks. They reported not having support at home and feeling further isolated from their peers. This point emphasizes the importance of teachers/tutors in mediating the mobile learning experience. Every participant in this study relied, to different extents, on a teacher/tutor. Those who withdrew early required more scaffolds for becoming self-directed learners. In addition, they sought out an environment with peers—also mediated by a teacher.

This is important to highlight because for the adults in this study, learning was fundamentally a humanizing process. According to Freire, *conscientização* was also a humanizing process that involved skillful mediation by a teacher and profound dialogue among peers. This process was evident in the work of Valadez and Cajina (2000). Participants in the mobile learning project also aspired to break away from the shadows of *la vergüenza,* or shame, however they had less opportunity for this aspect of learning than did the students in Valadez and Cajina (2000). Practitioners involved in mobile learning should not lose sight of the continued and important role they play as mediators of learning. In addition, they should be trained in the skill sets needed to facilitate *conscientização*—or transformative learning, as students participate in mobile learning.

Pedagogical limitations. The title of this work, *Texting conscientização? A study of immigrant Latina/o adults and mobile learning,* examines the possibility of using mobile devices to teach ABE in a humanizing and critical manner. This study design was intended to uncover the humanizing experience of literacy development and mobile learning. However, this study design co-existed with the practical implications of a pilot study. The exploratory design of the study called for practical decisions that did not always account for the humanizing aspect of literacy development. Thus, while *Leamos*™ was designed with a Freirean approach to learning where *conscientização* became the central learning goal, the mobile platform integrated only the

126

most basic components of this approach (e.g. generative words). The mismatch between pedagogical goals and research goals also limited the scope of the study. For example, it was difficult to gauge what the mobile phone afforded participants of a critical approach to literacy when practical considerations superseded the pedagogical aims.

Concluding Remarks

The primary factor that kept me engaged and motivated to do this work was precisely the humanizing possibilities of mobile learning. I conclude the discussion with Esperanza's story. Esperanza, age 32, explained in her interview her drive to develop her literacy skills.

> Al saber cómo leer, yo podré desarrollarme en el trabajo…Ahorita, trabajo en la parte más caliente de la cocina. Se pone pero bien caliente y no descanso porque no puedo leer las pantallas (Se refiere a las pantallas a donde se anuncian las ordenes de comida). Otros se cambían de las pantallas a las parrillas para aguantar lo caliente. Pero yo no. Otros me dicen, "Descansa. Vete a las pantallas." Y yo les digo, "No." Yo se que no las puedo leer así que me aguanto[52].

Her story will stay with me until well after the end of the study because it illustrated the human aspects of literacy acquisition. For Esperanza, developing her literacy skills had practical implications. The mobile phone would allow her to develop her literacy skills well enough to read the screens at work—an escape from the scorching heat of the grills. Furthermore, this story stood out in my memory as one of human dignity. Esperanza also aspired to develop reading and writing so that she would not have to just "put up" with the conditions she experienced at work.

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[52] Knowing how to read, I will be able to develop as an employee… Right now, I work in the hottest part of the kitchen. It gets extremely hot and I don't get a break because I can't read the screens up front (She is referring to the screens that hold the menu orders). Other employees rotate from the screens to the grills to tolerate the intense heat. But I have no options. Others tell me, "Take a break and rotate to the screens." And I just say, "No." I know that I can't read the screens so I just have to put up with it…

These narratives solidified my commitment to my work with mobile learning and for the benefit of these participants. They also appear at the center of this analysis. When looking at the affordances and the future design of mobile learning programs, it should be recognized that more of these narratives of the human experience must be taken into account and should inspire the future of mobile learning. Can mobile learning be designed to reflect these human experiences and aspirations? Will participants, such as Esperanza, be able to partake in the process of *conscientização* found in the *Leamos™* classroom or will mobile learning be an incomplete part of literacy acquisition for these participants?

The answers to these questions depend, in large measure, on the future direction of design in mobile learning. In this study, I have proposed that the human experience of learning (e.g. previous experiences in education, the learning aspirations of a community of learners, and situated affordances) should thoughtfully guide the design process, specifically when elaborating mobile learning programs for marginalized populations. In this way, mobile learning may be a departure from some trends in education and technology, where the digital divide replicates the inequalities found in schools. Similar to Jacobson (2012), I depart from this work cautiously optimistic about the "game changing" power of technology in education.

Margolis' (2008) study of African-American high school students and computer science revealed the pre-conceived assumptions, and expectations, of students enrolled in computer science classrooms. These assumptions and expectations structured students' opportunity to learn. She argued that "…students are afforded different, and highly unequal, computer science learning opportunities according to their racial and socioeconomic demographics of the students in the school," (p. 13).   As mobile learning expands as a field of study, Margolis' (2008) work may be a cautionary tale against pre-conceived assumptions and expectations about learners. In

this work, I posit that mobile learning can be a transformative learning opportunity for Latina/o immigrants learning to read and write. Mobile education may serve to meet the adult education needs currently out of the reach of Latina/o adults. Nonetheless, reaching marginalized groups through educational innovation also requires that design be informed by the experiences and perceptions of the users, in this case typically understudied and misrepresented. Learning about the histories, experiences, and perceptions of immigrant Latina/o adults developing native language literacy was the focus of this study. The study demonstrated that extending the possibilities of mobile learning to populations usually neglected in education presented powerful consequences for individuals, communities and society.

Getting Started:

Ahora vamos a continuar con unas preguntas sobre su niñez, acerca de sus experiencias en la escuela, y sobre algunos de sus habitos hoy en día. Si en algun momento no se siente cómoda/o puede pedir regresar a la pregunta al final o puede pedir no contester la pregunta.

Recuerde que ésto nos ayudará a nosotros a saber un poco más acerca de usted y que usted es de gran importancia para nosotros y para nuestra investigación. Gracias de antemano.

Pre-student Interview – Qualitative Questions:

Student's name: _____

Lugar de nacimiento: [Place of birth] _____

Edad: [Age] _____

Idioma que primero aprendió: Idioma que más sabe [First language learned/Mother Tongue]

_____

¿Cuáles idiomas sabe?: [What languages do you know?]

1. Cuénteme de su niñez… – [Tell me about your childhood…]
   (Note: You can probe using these questions- ¿Platíqueme porque no pudo ir a la escuela?
   ¿Cómo era su vida?)

2. Cuénteme de un momento en que se sintió apoyada/o en sus estudios…
   [Tell me about a time when you felt supported in your education…]

3. Cuénteme de un momento en que NO se sintió apoyada/o en sus estudios…
   [Tell me about a time when you did not feel supported in your education…]

4. ¿Cuál fue el incidente que le causo decir… "ya basta"…, tengo que aprender a leer? ¿A ver, cuénteme? *(Note: If they hesitate, add - "¿ya lo venía pensando"?)*
   [What was an incident that made you say, "That's enough! I have to learn how to read!"?]

5. ¿ Desde entonces ha asistido a clases para adultos, como por ejemplo clases de alfabetización o clases de inglés?
   [Since then have you attended adult school for example ESL or adult literacy classes?]

6. ¿Cómo cree que usará lo que aprenderá con Cell-Ed?
   (Note: Get specific examples how they would like to use literacy at home, with their children, or at work)

[How do you think you will use what you have learned with Cell-Ed?]

7. ¿Qué o quién le motivó a empezar el programa de Cell-Ed?
(Note: Remind them that it does not have to be a person— it can also be a something for example finding a job, helping their child to read etc*.)*
[Who or what motivated you to try Cell-Ed?]

8. ¿Qué le atrajo a comenzar el programa de Cell-Ed? ¿Por qué decidió inscribirse a este programa? *(Note:In other words, try to get student to answer why are they trying out this program and not another literacy program. Possible responses may include—*"This is the only literacy program I know of in Spanish." or "The mobility of the program." or "The opportunity to earn money."*)*
[What was appealing about Cell-Ed? Why did you decide to sign-up for this program?]

9. ¿Qué otras cosas le gustaría aprender o hacer después de terminar con el programa de Cell-Ed? *(Note: Ask students if there are classes that they would like to take, but have not taken because they don't feel strong in their reading capacities? Or things they would like to do that they don't have the confidence to take on e.g. speak to their son/daughters school teacher, look for a different job.)*
[What other things would you like to learn or do after finishing Cell-Ed?]

10. ¿Cómo completa las siguientes tareas:[How do you complete the following tasks:]

    a. Leer documentos médicos (e.g. carta del doctor) [Medical documents]
    b. Hacer transacciones medicas (e.g. filling out paper work at doctors office) [Medical transactions]
    c. Leer documentos educativos (e.g. las cartas de la escuela, las tareas de sus hijos etc.) [Education documents]
    d. Hacer transacciones educativas (e.g. conferencias, llenar formularios de la escuela etc.) [Educational transactions]
    e. Leer las especiales [Reading advertisement]
    f. Ir de compras (e.g. making lists, reading packaging, filling out credit applications) [Shopping]
    g. Leer documentos bancarios (e.g. carta del banco, saldos etc.) [Financial document]
    h. Hacer transacciones bancarias (e.g. depositos, prestamos etc.) [Financial transactions]

11. *Only if they have children. ¿Qué anhelos tiene para sus hijos? [What dreams do you have for your children?]

12. ¿Algo más que quisiera compartir? [Anything else you would like to say?

Cell-Ed Post Completion Interview:

Today's date:
Student's name:
Site:
Interviewer's name:

1. [Match: PreQ8] ¿Qué le atrajo a avanzar/terminar el programa de Cell-Ed? [What were attractive factors in moving along/finishing the Cell-Ed program?]

   open-ended _____

2. En una escala del 1-10 donde el 1 representa poco valor y el 10 un valor superior, que evaluación le otorga usted a los siguientes aspectos del programa de Cell-Ed. Puede también darnos una respuesta de "0" si este elemento no tiene valor alguno para usted. [Using a scale from 0-10 what value do you give the following ítems in your experience with Cell-Ed? You can use the value "0" if this ítem had no value to you.]

   a) Tecnología (Por ejemplo: enviar y mandar textos) ____

   b) Aprender a leer (Por ejemplo: usted tenía fe en que su participación en el programa le ayudaría a aprender a leer) ____

   c) Anonimato (Por ejemplo: no tiene que compartir sus respuestas en frente de una clase; nadie, excepto Cell-Ed, sabe quien es ni que respuestas ha hecho correctas o incorrectas) ____

   d) Control sobre su aprendizaje (Por ejemplo: Colgar y volver a marcar cuando esta frustrado con su lección; repasar lecciones a su propio paso; diseñar su propia tarea)_____

   e) Libertad (Por ejemplo: estudiar cuando su horario lo permita; no tener que ir al salón de clase a una hora y un lugar fijo.) _____

   f) Ayuda que recibió de su tutor de Cell-Ed. ____

   g) Ayuda que recibió de su tutor en casa. ____

   h) La relación que estableció con su tutor de Cell-Ed. ____

   i) La relación que estableció con su tutor en casa. ____

3. ¿A dónde estudiaba? ¿Y como lo hacía? (e.g. did they write etc.)

4. ¿A qué hora? Tenîa un horario para estudiar? Descríbamelo?

5. ¿Con quién estudiaba?

6. ¿Usted escribía sus lecciones? [Did you write down you lessons?]

   [If yes:]

   ¿En una día normal cuanto tiempo

   a) estudiaba en el celular estudiando? _____ horas _____minutos

   b) estudiaba usando su libreta? (e.g. escribiendo, pronunciando) _____horas _____minutos

7. ¿Que le gustó del programa de Cell-Ed?
   [What did you like about Cell-Ed?]

8. ¿Qué no le gustó del programa de Cell-Ed? (Note:If student hesitates use call-log history to remind them of the dificulties they had with the program e.g. sending out a text. Ask them what motivated them to continue and not give up even with the moments of difficulty.)
   [What did you not like about Cell-Ed?]

9. ¿Cómo se sintió cuando terminó el programa de Cell-Ed?(Note: If student did not finish congratulate them for finishing up to lesson # _____ and then ask them how it felt/feels to have advanced so far. Also, ask student if they would like to finish and what would help them to achieve that goal.) [How did you feel after finishing the Cell-Ed program?

10. Match: [PreQ1] ¿Cómo fue esta experiencia con Cell-Ed diferente a su aprendizaje en su niña/o, en una escuela para adultos, u otro tipo de experiencia que haya tenido en la escuela? [How was your experience different from your childhood experience with education or other experiences with formal schooling?]

11. Match: [PreQ7] ¿Qué o quién le motivó a terminar o a avanzar en el programa de Cell-Ed? *(Note:*Who helped them; encouragement from others; recognized applications of print literacy- did they start using what they learned right away?) [Who or what motivated you to finish the program?]

12. [Match: PreQ6] ¿Cómo está usando lo que aprendió con Cell-Ed?
    (Note: *Get specific examples how they use literacy at home, with their children, or at work.)*
    [How are you using what you learned with Cell-Ed?]

13. ¿Describa su uso del celular? ¿Después de Cell-Ed ha usado su teléfono celular para mandar textos a sus familiares o amigos? ¿Manda mensajes locales y/o a otras partes del mundo?
    [Describe your use of the cell phone? After Cell-Ed have you used your phone to send text messages to family or friends? Do you send local and international text messages?]

14. [Match: PreQ 9] a) ¿Qué otras cosas le gustaría aprender o hacer ahora que ha terminado Cell-Ed? (Note: Ask students if there are classes that they would now take becuase they now feel more confident in their reading capacities? Or things they would like to do that they have the confidence to take on e.g. speak to their son/daughters school teacher, look for a different job.)
    [What other things would you like to learn or do now that you have finished Cell-Ed?]

    b) ¿Cuáles otras metas o sueños tiene usted?

    [What other goals and dreams do you have?]

15. ¿Cómo motivaría a otros a aprender a leer y escribir? [How would you motivate others to learn how to read and write?]

16. [Match: PreQ 10] Cómo completa las siguientes tareas:[How do you complete the following tasks:]

    a. Leer documentos médicos (e.g. carta del doctor) [Medical documents]
    b. Hacer transacciones medicas (e.g. filling out paper work at doctors office) [Medical transactions]
    c. Leer documentos educativos (e.g. las cartas de la escuela, las tareas de sus hijos etc.) [Education documents]
    d. Hacer transacciones educativas (e.g. conferencias, llenar formularios de la escuela etc.) [Educational transactions]
    e. Leer las especiales [Reading advertisement]
    f. Ir de compras (e.g. making lists, reading packaging, filling out credit applications) [Shopping]
    g. Leer documentos bancarios (e.g. carta del banco, saldos etc.) [Financial document]
    h. Hacer transacciones bancarias (e.g. depositos, prestamos etc.) [Financial transactions]

17. *Only if they have children. [Match: PreQ 13]¿Qué anhelos tiene para sus hijo/as? [What dreams do you have for your children?

18. ¿Algo más que quisiera compartir? [Anything else you would like to share?]

Please say something nice to close the interview, or "Muchas Gracias por su tiempo, y que tenga un lindo día."

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