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Handbook of Research on the Societal Impact of Digital Media

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A volume in the Advances in Media,
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Chapter 23
The Role of Mobile Learning in Promoting Literacy and Human Rights for Women and Girls

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ABSTRACT

In this chapter the authors review the fairly recent advances in combating illiteracy around the globe through the use of e-readers and mobile phones most recently in the Worldreader program and the United Nations Educational Scientific and Cultural Organization (UNESCO) mobile phone reading initiatives. Situated in human rights and utilizing the lens of transnational feminist discourse which addresses globalization and the hegemonic, monolithic portrayals of "third world" women as passive and in need of the global North's intervention, the authors explore the ways in which the use of digital media provides increased access to books, and other texts and applications in both English and native languages for people in developing countries. However, while advances in combating illiteracy through the use of e-readers, mobile phones and other mobile learning initiatives are promising, the tensions and power imbalances of digital literacies, which resources are available by whom, for whom and why, must also be examined.

INTRODUCTION

Literacy is a human right, a tool of personal empowerment through expression as well as a means to social, cultural and human development. Yet the nature and use of literacy, for whom, under which circumstances and for what purposes is a contentious question that depends greatly on the social views, cultural capital, politics, and temporality of both its teachers, students and the communities of discourse in which they participate (Foucault, 1972; Gee, 1996)). In short, who is considered literate and what literac(ies) are considered to be worth knowing are dependent

on dominant societal, and in an age of globalization, transnational constructs.. Carl Kaestle (1991) points to the inherently social and political aspects of literacy in stating,

Literacy is discriminatory with regard to both access and content. Problems of discrimination are not resolved just because access is achieved; there is a cultural price tag to literacy. Thus, whether literacy is liberating or constraining depends in part whether it is used as an instrument of conformity or creativity. (p. 30)

That is to say that the mere access to literacy does not guarantee that access to the liberatory potential of literacy is achieved as well. Rather, access is a necessary but not sufficient condition for liberation.

In discussing the plurality of literacy and the nature of being literate, the United Nations Educational, Scientific and Cultural Organization (UNESCO) posits, "the way literacy is defined influences the goals and strategies adopted and the programs designed by policy makers as well as the teaching and learning methodologies curricula, and materials employed by practitioners. Its definition also determines how progress or achievements in overcoming illiteracy will be monitored or assessed" (UNESCO, 2004, p. 12). According to recent international data compiled by UNESCO, there are currently 773.5 million adults globally who are functionally illiterate. Of that number, 63.8% are women. 123.2 million children are illiterate, 61/3% of them are girls. The lowest literacy rates worldwide are found in Sub-Saharan Africa and in South and West Asia (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2013). The significance of these numbers to the struggle for the recognition of human rights for women cannot be ignored (Kelleher, 2014). Addressing global illiteracy, especially for women and girls

is a necessary, but not sufficient component in recognizing the human rights, especially in regard to the education of all.

In this chapter we review the advances in combating illiteracy around the globe through the use of mobile learning initiatives such as e-readers and mobile phones, most recently in the *Worldreader* program as well as in UNESCO's mobile reading initiatives (West & Chew, 2014). We utilize the lens of transnational feminist discourse (Hesford & Kozol, 2005; Swarr & Nagar, 2010) that addresses the effects of globalization and the hegemonic and monolithic portrayals of "third world" women as passive and in need of the global North's intervention. Additionally, while advances in combating illiteracy through the use of e-readers and other mobile devices are promising, the tensions and power imbalances of digital literacies, especially in developing countries must also be examined. Intrinsic to this examination is the recognition of the multifaceted interconnections between global flows, particularly of information and ideas, when digital media "travel" from one locale to another, far removed not only in place but in resources and power as well.

BACKGROUND

Thus, to begin, we situate this review in the affordances and limitations of human rights discourse, especially as it relates to women and girls. Building upon the themes and tensions particular to the human rights discourse, we discuss the ways in which transnational feminisms speak to the effect of globalization and the contexts of both the local and the global, as well as the public and private sphere. Having established the lens in which we situate digital media in this review of the literature, we explore mobile learning initiatives as sites where the promise of digital media may have to attend to concerns around the "reproduction of

gender, class and racial inequality" (Blackmore, 2005; p. 244) even as they strive for global literacy.

Human Rights

The notion of human rights recognized today was established with the United Nation's *Universal Declaration of Human Rights* (UDHR) in 1948 written in the aftermath of the Second World War. Although the primary intent of the document was to prevent a recurrence of the human rights travesties that occurred during WWII, the UDHR also provided for education as a human right stating in Article 26:

(1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.

(2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.

(3) Parents have a prior right to choose the kind of education that shall be given to their children. (United Nations, resolution 217A [III], 1948)

As Fionnuala Waldron (2010) elaborates, these documents provide a global framework for providing education for all, and just as importantly, education for the purpose of creating and protecting a more just global citizenry.

In this age of globalization, where identities are both global, local and contested spaces within each, (Beck, 2010, 2002, p. 36; see also Apple, Kenway, Singh, 2005), the ways in which

literacies are constructed, created and by whom, become increasingly crucial. Yet, to be literate and have access to literacy is a necessary, but not a sufficient condition for individual, societal, and indeed, global betterment and advancement. For literacy to fulfill its promise also requires change in political and social structures that underlie and perpetuate inequality; it must be constructed as a right (Bhola, 2008). As Katerina Tomasveski, the late Special Rapporteur to the United Nation argued:

The right to an education is a bridge to all human rights: education is indispensible for effective political participation and for enabling individuals to sustain themselves; it is the key to preserving languages and religions; it is the foundation for eliminating discrimination. It is the key to unlocking all other human rights (Tomaseveski, 2003, p. 172).

In contextualizing literacy instruction, especially in the global context, we place a human rights-based approach to literacy education if not on a continuum with critical pedagogy and social justice, then certainly from a similar lineage of ideals. However, there is a distinct difference between the auspices of critical pedagogy and a human rights based approach: while critical pedagogy espouses similar ideals and resulting practices (i.e. praxis, social justice, etc,) they remain contextualized to a particular nation-state. A human rights based approach situates education in a geo-political framework that claims literacy as indivisible from other *universal* human rights including the social, cultural, civil & political (UNESCO/UNICEF, 2007).

However, despite the laudable goals espoused within the human rights education discourse, it is not without critique especially around issues of access, inclusion and equality for both men and women, boys and girls. We turn now to the ways in which transnational feminism speaks to the effects of globalization and to some scholar's critiques

of the public/private, political/cultural aspects of human rights-based discourse in education, in general and literacy in particular.

Globalization and Transnational Feminism

Globalization may be characterized by the extensive movement or flow of information, ideas, images, capital, and people across increasingly permeable political borders due to economic and technological change (Castells, 1996; Luke, 2002). The speed, durability, flexibility and mutability of these transnational flows and networks affect almost every aspect of local and global life, *albeit*, unevenly to the effect that the global and the local are not experienced as polarities, but rather as mutually influencing spaces (Beck, 2002; Harper & Dunkerly, 2010).

Transnational feminism has emerged largely as a response to international and global feminism that has been critiqued as "rigidly adhering to nation-state borders and ignoring and paying inadequate attention to the effects of globalization" in the former, and for "prioritizing northern feminist agendas…and for homogenizing women's struggles for sociopolitical justice, especially in colonial and neocolonial contexts" (Nagar & Swarr, 2010, p. 4). In other words, transnational feminism speaks to the hegemonic and monolithic portrayal of "Third World women" as passive victims and instead seeks to recast and highlight their activism and agency in such a way that transnational solidarity and collaborations can be reached. As Nayereh Tohidi (2005) explains," the concept of transnational feminism offers the desirability and possibility of a political solidarity of feminists across the globe that transcends class, race, sexuality and national boundaries" (Tohidi, 2005, p. 5)

Thus, transnational feminism is concerned with "the interdependence of the global and the local – how each is implicated in the other – and how the "local, private and domestic are constituted in relation to global systems and conversely, how such systems must be read for their particular locational inflection" (Hesford & Kozol, 2005, p. 15). However, it is in the realm of particular locational inflection as well as in the interplay of local/global and the public/private sphere in human rights discourse, especially around education, that transnational feminists critiques systems that may perpetuate inequality and continue to portray women in a monolithic manner. We turn now to those critiques surrounding human rights discourse as well as to the corporatization of non-governmental agencies (NGO's) and the "NGOization" of development in the Third World.

Transnational Feminist Critique of Human Rights Discourse

Despite the overarching goals of human rights that would appear on the surface to be without reproof, Blackmore (2005) argues that the human rights movement has all too often focused on political and civic rights that largely impact men in the public sphere and less on rights that most impact women in the economic, social and cultural spheres such as those that relate to education, childcare and domestic violence. As she contends:

Education policy discourses, for example, distinguish the human *right* to a basic education, but rarely calls upon the right to an "inclusive" education, one that is about empowerment, that recognizes girls' and women's needs as well as interests. The latter would have as a fundamental proposition of a more inclusive human rights discourse the development of individual agency that would be about participation, inclusive curriculums, as well as just outcomes, essential tenets of education for democratic citizenship. But there is little challenge within current human rights discourses to change the dispositions of education away from social selection and the reproduction of gender, class and racial inequality. The dominant view is that access to education means equality (p. 244).

In recognizing the importance of literacy acquisition in recognizing both private/public sphere human rights, the development of a literate female global population is imperative in creating a space for women and girls to move limited definitions of citizenship and rights into the discourse of a global society (Dunkerly & Harper, 2013). Yet, paradoxically, it is in that space of reform and development that women become a "project" and their literacy an "objective" that negates their agency and instead positions them as in need of the Global North's salvation.

Transnational Feminist Critique of Non-Governmental Organizations (NGOs)

Since the 1980's, non-governmental agencies have become one of the primary vehicles though which funding for development, including mobile learning initiatives are delivered (Peake & De Souza, 2010). Indeed, organizations such as the *United Nations Foundation*, a public charity that supports United Nation's efforts has invested and or raised over 1.5 billion dollars over the past decade, delivered to the UN and UN partners including NGO affiliates (The United Nations Foundation website, n.d.). Although there is considerable diversity among NGOs, their developers and funding sources, the extent to which they have also become corporatized and act as extensions of the state in regard to labor and resources is well documented (Farrington, Bebbington, Wellard, & Lewis, 1993). Additionally, the role of donors in influencing the direction, meaning and legitimacy of the organization without being "on the ground" is also of concern, especially in regard to local agency vs. NGO objectives (Hilhorst, 2003). As the *Sangtin Writers* (a collective of women researchers and activists in India) ask: "What does it mean when NGOs or movements begin to determine for a village which issues it should mobilize around and which people should it work with? Whose village?

Whose issues? Whose empowerment? And who is authorized to claim credit for that empowerment? (Reena, Nagar, Singh, & Surbala, 2010, p. 134).

Another issue is raised by Linda Peake and Karen de Souza, who voice concerns about the corporatization of NGOs and the attendant practices of establishing benchmarks, outcomes and plans for sustainable development. While these and other aspects are certainly a necessary component of organizational structure, they "at the same time, neatly package it up into projects that deal, for example with "women" or other apparently discrete aspects of development for disconnected periods of time (Peake & De Souza, 2010, p. 110).

Ultimately, however, the most essential concern of transnational feminism in regard to the work of some NGOs comes down to the collapsing of women's issues into singular, simplistic and monolithic categories. The *Sangtin Writers* offer a succinct and passionate argument against this:

When women's issues are collapsed into a pre-designated gender and a pre-marked body, and "feminist activism" is gathered and piled into a predetermined list of issues and when a complex political and cultural economy at local and global scales becomes associated with such a classification, feminism becomes an institutionalized structure, a bureaucracy, and a commerce that feeds the status quo. A compartmentalization of poverty and violence along the lines of gender helps sustain the existing caste-and class- based structures of privilege and deprivation (Reena et al., 2010, p. 140).

As we turn now to a review of the extant literature, we do so through the lens of transnational feminisms and against the backdrop of historical human rights efforts. Throughout this review, we will utilize that lens to interrogate local v. global voice, the construction of womanhood and girlhood, the proliferation of the Global North's

perspective at the possible expense of local knowledge; and the ways in which technology, while indeed liberating in some regards, may hold the potential for inadvertent hegemony as well.

OVERVIEW OF CURRENT RESEARCH

In reviewing the uses of digital media in promoting the human rights of women and girls through increased literacy, we begin with an overview of the research conducted around the utilization of mobile phones both in formal education and in personal use as a promising conduit for recognizing international literacy goals, most notable those of UNESCO's *Education for All* initiative that relate to mobile learning, namely:

- Improving levels of adult and youth literacy: how mobile technologies can support literacy development and increase reading opportunities.
- Improving the quality of education: How mobile technologies can support teachers and their professional development.
- Achieving gender parity and equality in education: how mobile technologies can support equal access to and achievement in basic education of good quality for all, in particular for women and girls.

While the use of either personally owned, or organization distributed, mobile phones to provide access to books of all varieties has been in existence for a few years, the utilization of electronic readers (e-readers) is a bit more recent. *WorldReader* is one such program, and is the largest in global reach and influence to date. Given that the impetus for e-reader initiative build from research around utilizing mobile phones for literacy access and learning, we begin by offering an overview of mobile learning in general and then discussing

the advances in mobile reading globally in particular. We then turn to developments in utilizing e-readers in formal school settings in developing countries. While there is not a substantial body of research on the use of digital media and the use of personal electronic devices such as mobile phones and e-readers in promoting literacy and human rights for women and girls, what exists offers a hint both tantalizing and cautionary of what may be possible in the near future.

Mobile Learning

Mobile devices can now be used to provide learning to those who have been previously unable to access traditional learning opportunities for reasons of location, finance, disability, or infrastructure. In 1972, Kay created a concept model of the Dynabook, the first handheld multimedia computer intended for learning that could be used outside the typical constraints of the classroom. Kay described some of the functions of this portable computer:

Imagine having your own self-contained knowledge manipulator in a portable package the size and shape of an ordinary notebook. Suppose it had enough power to outrace your senses of sight and hearing, enough capacity to store for later retrieval thousands of page-equivalents of reference materials, poems, letters, recipes, records, drawings, animations, musical scores, waveforms, dynamic simulations, and anything else you would like to remember and change. (Kay & Goldberg, 1977/2001, p. 167)

From the initial conception of the Dynabook, mobile devices were soon developed that have extended the capabilities described by Kay & Goldberg. Over a relatively short period of time, mobile learning has changed the learning landscape. In this section, a brief overview of recent history presents the achievements of the

research comuunity and global agencies, such as UNESCO, USAID, and the World Bank, in reviewing, articulating, and promoting mobile learning across the globe.

Mobile Learning Initiatives: From 2003

In 2003, there were a number of mobile learning initiatives taking place in countries across the globe. These research initiatives typically used a basic mobile phone that had phone and SMS capabilities. Many of these researchers were responding to the call to provide an education to children in developing nations. At the United Nations Millennium Summit in 2000, development goals were written and signed by 189 heads of state from across the world. From those eight goals, one was to provide primary schooling for all children by 2015. In 2000, this was a difficult target, as there was typically very little to no access to basic schooling for many children in places. For example, four out of every ten primary-aged children in the Sub-Sahara do not attend school (UNESCO, 2011). Information Communication Technology (ICT) resources have not always been available to support training and encourage schooling despite the advocacy efforts from the Department for International Development UK, UNESCO and the World Bank.

There is a paucity of trained teachers and resources in many rural locations to provide education to the students. In 2003, a *Text 2 Teaching* program was funded by Nokia. This program was intended to bring teaching resources to provide education to poor families in rural locations with a low population density. These areas lack even the basic Internet access to have access to educational resources. The main component of the program is to provide the teachers with access to videos that can be downloaded at high speeds using the cellular network. From the basic mobile phones provided to the teachers, these videos, of expert teachers explaining mathematics, science, and English concepts, could be broadcast on large screens for the students to watch. The initiative started in the Philippines but since has expanded to India, Chile, Nigeria, and Columbia.

To better understand how technology can provide better access and quality to teacher education in sub-Saharan Africa, *Deep Impact: An investigation of the use of information and communication technologies* (Leach, 2005) was conducted in Bangladesh. Similar to the *Text 2 Teaching* program, teachers were provided with basic mobile phones. The teachers used these to connect with a tutor and peers to share photos and short videos of teaching practice. The researchers reported that the use of mobile phones provided benefit to the teachers through the facilitation of contextualized, constructive, situated, and collaborative learning enabled by the use of the mobile devices.

Mobile Learning Initiatives: 2011-2014

The mobile learning work of global agencies has increased greatly since 2011 and those efforts include: a) drawing together mobile learning researchers and scholars to better understand what we know about mobile learning and how it can be used to extend and enhance learning and providing opportunities to access appropriate learning around the globe, and b) produce publications to share what is known about mobile learning with policy makers, educational leaders, and other stakeholders. The following table provides some examples of the work of global agencies since January 2011 (see Table 1).

Since 2000, there has been a rise in the number of mobile learning implementations connected with the concomitant emergence of new devices. This is not to say that cutting edge technologies are ubiquitous in these developing countries; but that the speed of new technological devices has driven down the cost of the past generation technologies making devices such as the basic mobile phone

Table 1. Global mobile learning initiatives

Year	Agency	Action
Feb. 2011		World Mobile Congress (held annually)
Aug. 2011	USAID	The first m4Ed4Dev symposium in Washington DC
Nov. 2011	World Innovation Summit for Education	Debate focused on mobiles, education and the hard-to-reach
Dec. 2011	UNESCO	The First Mobile Learning Week
2011	World Bank	eTransform Africa
2012	World Economic Forum	Accelerating the Adoption of Mobile learning: A call for collective and collaborative Action
2012	GSMA	Report on Transforming learning through mEducation
Mar. 2012	UNESCO hosted by CoSN	International Symposium
Early 2012	UNESCO	Funded by Nokia commissioned regional reviews to capture the global state of mobile learning.
Sept. 2012	USAID	mEducation Alliance Symposium
Feb. 2013	UNESCO & USAID	Symposium focused on Education for All goals related to mobile learning- mobiles for literacy
2013	UNESCO	UNESCO Policy Guidelines
2013	UNESCO	Publication on literacy for women and girls
2013	UNESCO	Publication on youth workforce development
2013	UNESCO	Publication on literacy

Table adapted from Crompton, H. (in press). The global mobile story so far. *In Mobiles for lifelong learning & skills development*. United Nations International Telecommunications Union (ITU). Geneva, Switzerland.

affordable and accessible in many developing countries. In addition, mobile network operators have been competing to provide connectivity to the global south, resulting in reduced prices. These changes have seen a rise of a new technological infrastructure in many developing countries.

Mobile Learning Initiatives to Support Women and Girls

In the past decade, a number of researchers have responded to calls for gender equilibrium, to design mobile learning initiatives to support women and girls. From a review of published information and data, it appears that these initiatives have focused on empowering women and girls by providing information about health, finance, and general education. This section provides the reader with examples of efforts in these areas.

Health

In many developing countries, crucial healthcare issues are often addressed by family members and the local community who do not have the training or knowledge to ensure the well-being of the individuals. In Timor-Leste, pregnancy is a life or death reality with many women and babies dying in the first few hours or days after the birth. In an effort to support the women in this region, Health Alliance International (HAI), a US based NGO, won a USAID grant to connect women with midwives. The team created an internet-based program to send out bi- weekly SMS messages to the pregnant women with information and advice on postpartum and newborn care. The messages were sent in Tetun; the widely spoken language in that area. *Liga Inan* (connecting mothers in Tetun) or *Mobile Moms*, is a four year initiative

from 2011 (see http://www.healthallianceinter-national.org/blog/post/mobile-moms-liga-inan/ for more information)

MomConnect is a similar mobile learning initiative in South Africa. Supported by UNICEF Kwazulu-Natal Department of Health connect pregnant women and healthcare workers via SMS. However, unlike the women in Timor-Leste, these women can get access to healthcare. The messages help the women keep track of appointments and reminders to visit the clinics for regular check-ups (see http://www.unicef.org/southafrica/media_14102.html)

Sexual and reproductive health is essential to the wellbeing of a person and especially for young people. However, gaining access to accurate information can be difficult with many relying on peer information, due to cultural/social stigma or taboos. *Learning about Living* (LaL) is a OneWorld initiative that provides information about sexual and reproductive health and rights (www.oneworld.org) Young people may access information and a question and answer service via SMS and social media platforms (e.g. Facebook). LaL was launched in 2007 in Nigeria and is now implemented in Senegal, Morocco, Mali, Egypt, and Cambodia

Financial

New media is providing an opportunity for women and girls to compete with their male counterparts. By providing information to young girls they can make informed choices about their futures and pursue aspirations beyond a final goal of marriage. Launched in 2009, *Nokia Life* offers information and educational opportunities to people in China, India, Indonesia, and Nigeria. This initiative gives guidance to women who are interested in starting a small business and become economically active. The information is provided in 18 languages and bespoke to the culture and needs of women living in particular communities.

In Kenya, the *Open Kenya Initiative* offers open educational resources to enable girls to solve issues in their communities. These girls are also provided with a peer mentor to help guide them in achieving these goals. In South Africa, *ShetheGeek* is an initiative funded by ITU that is a blog-based community of women who seek to empower women through technology. Girls are also being encouraged to gain financially from exploiting new media. In Uganda, *GirlGeekKampala* was founded in 2012 by a small group of technology leaders. Women in Uganda feel that they are discouraged from entering into computer science with the lack of scholarship and female mentors contributing to a gender gap (Ochwa-Echel, 2011). *GirlGeekKampala* encourage the culture of programming and coding among female university students.

General Education

Mobile learning initiatives have been introduced around the globe to support women and girls in learning general educational concepts, such as literacy and mathematics.

Aligned to Education for All goals, UNESCO started a project to answer pertinent questions on how mobile learning can be used to appropriately and effectively support women and girls in education. This initiative was designed to answer three questions: 1) How should effective mobile learning initiatives for women and girls be designed? 2) How can they be created in gender-sensitive and sustainable ways? and 3) What barriers need to be addressed and what pre-conditions need to be in place for successful implementation?

The *Mobile Literacy Program* was a one-year program specifically targeted at improving the literacy skills of women living in villages in rural Afghanistan. Afghanistan has the lowest literacy rates in the world with an estimated 43.1% of men and just 12.6% of women being considered literate. After mobile phone use rose from 1% to over 18

million active mobile phone users in 2012, this telecommunications infrastructure was used to provide access to the under-served population in Afghanistan. This initiative used a combination of classes and literacy tasks using mobile phones. The participants received assignments texted to their phones that involved topics relevant to the daily lives of the women in the group. This helped the learners understand that literacy was a practical skill for everyday life.

UNESCO also implemented a *Mobile-Based Post Literacy Program* in Pakistan in 2009. Gender disparity in literacy is high in Pakistan with 69% of males and 45% of females over 15 years of age literate (see http://www.pbs.gov.pk/content/pakistan-social-and-living-standards-measurement (Pakistan Bureau of Statistics, 2012-2013). The disparity was high in urban populations but the greatest difference was in the rural population.

The literacy program has two stages. In the first stage, women attend a basic literacy course with face-to-face training on how to write the alphabet and to read with emphasis on phonics. In the second stage, the women are given a mobile phone to begin a two-month mobile-based literacy program. The women receive SMS messages six to eight times per day on topics including Islamic teaching, numeracy, health, general knowledge, local government, beauty tips, food recipes, and jokes. As the messages are received, the women read the messages, practice writing the messages, and respond to questions.

Lower income, rural children were targeted in a literacy initiative in North India. In this program, children who attended an after school program were each given a cellphone with English Language Learning games pre-loaded. The mobile devices were loaned to the children for five months to support language learning with games (Kam, Kumar, et al, 2009). Gaming was also the focus of *M4Girls*, a project to bridge the gap between boys and girls mathematical competencies in underserved communities in South Africa

(Zelezny-Green, 2013). Girls were given mobile phones with curriculum aligned mathematical content in games and videos to boost achievement.

Developing a sense of community when learning is important for women as they have a space to network, talk and be heard, and listen to others (Fletcher, 1999). However, developing learning communities can be difficult due to cultural and location restraints. Mobile devices can provide opportunities to overcome these barriers and empower women and girls. The *Pink Phone Project* in Cambodia is an initiative to train women leaders to use mobile devices to share ideas, resources, and information. Since 2010, *Oxfam Cambodia and Women for Prosperity*, a local NGO, have taken the Pink Phone Project to women in three provinces-Kratie, Kampong Thom, and Stung Treng. In these locations, men are more likely to have mobile phones than women and domestic violence is common. This initiative provides mobile phones to women and these phones are painted bright pink to discourage men from using them (see http://policy-practice.oxfam.org.uk/blog/2012/03/pink-telephones-in-cambodia).

Mobile Reading

Although the Internet and other mobile learning advances have provided a greater number of people with access to more information in recent times, than in all of the physical libraries ever in existence there still remain vast populations that lack connectivity and access to the internet and to the necessary technology and computers need to access it. Despite the seemingly ubiquitous presence of the Internet, only 40 percent of the world's population is online and in developing countries 16 percent fewer women than men use the Internet (ITU, 2013). Moreover, the discrepancy and inequality in access is as disturbing as it is predictable. Currently in Africa only 7 per cent of households are connected to the Internet, compared with 77 per cent in Europe (West &

Chew, 2014). Thus, millions remain functionally isolated from textual resources that are foundational to education, employment and engagement in the globalized world.

Given the unequal and indeed, in some locales, impractical access to computers and the Internet, mobile phones have become one of the primary means of accessing text when books and libraries are either non-existent or too expensive to stock and maintain. The difference in access to traditional libraries globally depicts the rather dismal nature of equality in access: In the United Kingdom for example, the ratio of libraries to population is 1:15,000 citizens. In Nigeria, that ratio is 1: 1, 350,000 (UNESCO, 2013). However, recent data from the United Nations indicate that of the an estimated global population of 7 billion, over 6 billion people now have access to a working mobile phone. For the sake of comparison, 4.5 billion people have access to a toilet (UNESCO, 2013). In order to capitalize on the existence of even basic mobile phone ownership and usage, corporations such as Nokia have partnered with UNESCO and the non-profit organization World Reader to utilize a mobile reading app to provide access to text for whom print based books are inaccessible. *Worldreader Mobile* (WRM) is an application that allows people to access books and stories from a wide variety of mobile phones, including inexpensive feature phones. In order to determine the effectiveness of mobile reading in developing areas, UNESCO conducted a large survey of mobile reader users to determine who was reading, what they were reading and how the users of mobile reading felt about the experience of reading on mobile device. On average, WRM had 334,000 active users per month. In order to utilize WRM, users download the free application, which is stored in the memory of the phone. It is important to note, that while *Worldreader* Mobile (WRM) provides *access* to over 6,000 digital titles, mobile data connection and the resulting expense

is required of the user. Although the majority of the titles available through the app are free, most of the books are not downloadable, nor can they be read offline.

The study conducted by UNESCO in partnership with *Worldreader* and Nokia was designed as an "in-app" survey with the following criteria: low literacy rates for adults and youth, and a minimum of 6,000 established *Worldreade*r users per month. Seven countries were selected for participation based on those criteria: Ethiopia, Ghana, India, Kenya, Nigeria, Pakistan and Zimbabwe. Although Kenya and Zimbabwe have distinctly lower adult illiteracy rates (13% and 8% respectively, other countries fare much worse. In Ethiopia, for example, the adult illiteracy rate is over 60 percent for the total population and over 70 percent for women; in Pakistan the illiteracy rate is 45 percent for all adults and 60 percent for women. (UNESCO, 2013). Overall, the average illiteracy rates for adults in the countries included in this study are 34 percent or approximately one third of the total population (see Figure 1).

Perhaps not surprisingly, the illiteracy rates for youth in the countries surveyed are similar to those of the adults. Again, Kenya and Zimbabwe have youth illiteracy rates far below the averages found in the other nations surveyed, while Ethiopia has the greatest percentage of illiterate youth at approximately 45%. Overall, the average youth illiteracy rate for all seven countries included in the study is 20 percent, or one-fifth of the population. The rates for each country included are summarized in Figure 2.

In order to conduct the survey, users were issued an invitation that appeared on their mobile device and their reading frequency was tracked by monitoring usage. 4,333 readers in the seven countries completed the survey and were monitored. Of those, 3,332 were men and 1,001 were women. Readers of both genders were categorized in the following way:

Figure 1. Adult illiteracy rates in developing countries
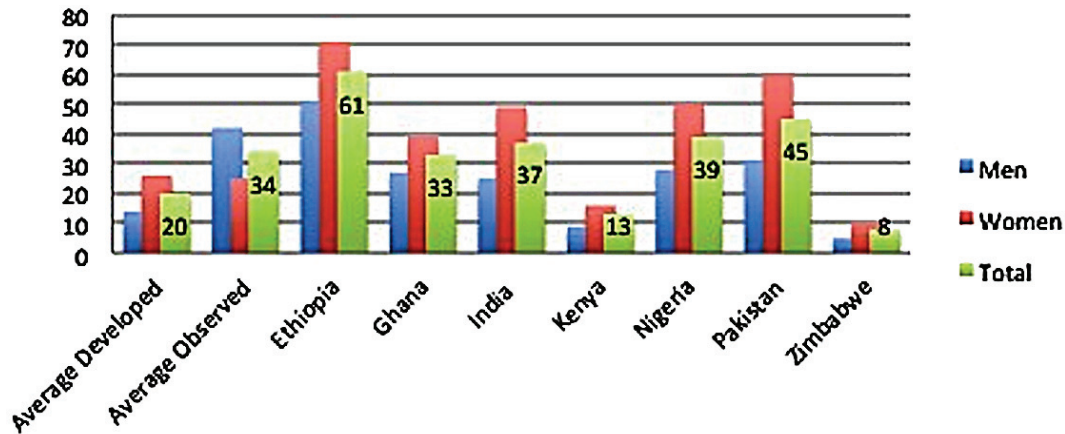
Figure 2. Youth illiteracy rates in developing countries
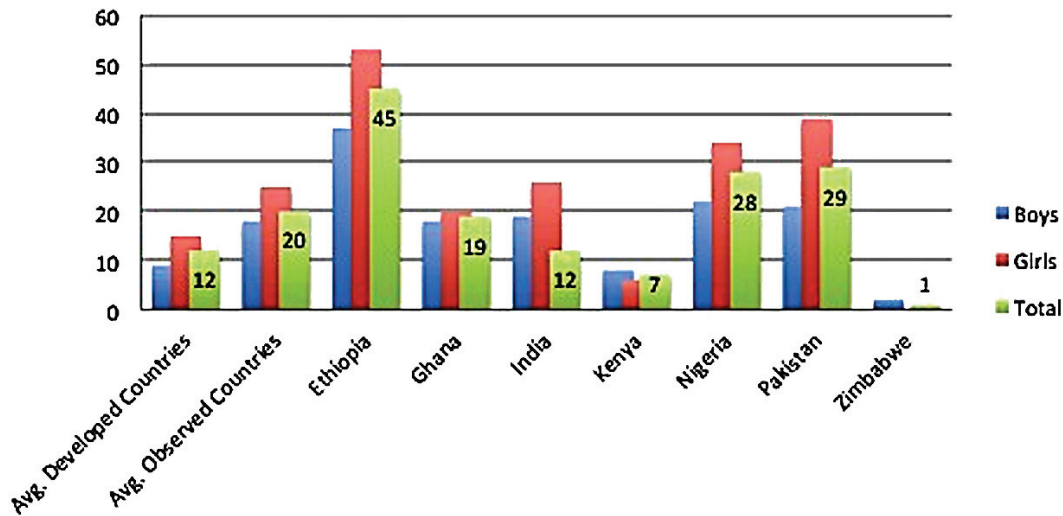
- Occasional Readers – read 2–4 times per month
- Frequent Readers – read 5–20 times per month
- Habitual Readers – read 21–40 times per month
- Power Readers – read more than 40 times per month

The researchers tracked usage in order to compare actual time spent reading with self-reported attitudes and perceptions towards mobile reading. Following the survey, researchers attempted to conduct qualitative follow-up phone interviews with those designated as frequent readers, however, the response rate was poor and resulted in only a total of seventeen interviews. A small incentive in the form of mobile credit equal to US $0.50 was offered to those completing the survey, which could be used to purchase books. Despite the limitations of only including readers using the *Worldreader* mobile app, the results of

the study present credible data in assessing the demographics of users, the frequency with which they engage in mobile reading and their attitudes towards reading on mobile devices.

Mobile Reader Demographics

In general, mobile reading demographics closely mirrored mobile phone ownership in the countries represented in the study. On average, there are approximately three male mobile readers for every female. This gender difference is narrowest in Nigeria and Zimbabwe with the ratio of two male readers for every female, while in Ethiopia and India the gap is the widest at nine males for every female. However, women used mobile phones for reading more frequently and for more diverse reasons than did men. This is encouraging, as it highlights the potential of mobile reading to provide women and girls with greater opportunities for literacy and for civic participation. Indeed, the gender balance shifts to a female majority across countries when viewing reading activity. Among the top 2,000 active readers, over 59 percent are female; among the top 1,000 active readers, 72 percent are female; and among the top 100 active readers, 80 percent are female. As West and Chew (2014) explain:

On average, women spent 207 minutes per month reading on their mobile phones during the three-month period of the study. Men, by contrast, read about 33 minutes per month. Women also tended to read more frequently and for longer periods at a time. During the study period, men read 3 to 4 times a month for around 10 minutes each time, while women read around 11 times per month for about 19 minutes each time. In terms of hours read per month, women performed 66 per cent of the total reading completed during the study period, despite the fact that they only constitute 23 percent of the total readers (p.30).

In addition to gender differences, this study also captured difference in age and educational attain-

ment. Perhaps not surprisingly, the participants in this study tended to have achieved a higher level of education than the respective national average – 24% of respondents reported having a bachelor's degree of higher. In comparison, the average for higher education degrees across nations involved was 8.7%. Surprisingly though, reading time diminished for those who had obtained a bachelor's degree in comparison to those still in secondary (high) school. The researchers posit that this may be due to young people studying for entrance exams for bachelor education programs therefore accessing greater amounts of text for longer periods of time). A similar pattern was observed in those readers who were in or preparing for master's or doctoral programs. An interesting theory posed by the researchers is that as higher education is obtained, printed books and other texts are more accessible and digital reading is used less.

These finding also align with findings related to the age of the readers in question. Across and within countries, users of digital reading were typically young. The average age of participants in this study was 24. Over 90 percent of the survey respondents were under the age of 35, and two-thirds of respondents were under 24 years old. Across all countries, fewer than 1 in 10 mobile respondents were over the age of 35 (West & Chew, 2014). These findings align with the illiteracy rates for adults and youth discussed earlier. It would stand to reason that with lower illiteracy rates, and a higher likelihood of having and using a mobile phone for a variety of reasons, younger people would be more likely to utilize their phones for the purpose of reading.

Attitudes Towards and Purposes for Mobile Reading

Generally speaking, the results from this study indicated that people enjoyed reading on their mobile phones, with those that reported a greater affinity for reading in general, having the value of reading reinforced. For those who reported not caring for reading traditional text, the results indi-

cated a better attitude towards reading on a mobile phone. This is another encouraging finding from this study in regard to greater self-efficacy in reading, especially in terms of promoting literacy for women and girls. Although fewer women owned mobile phones, a greater percentage of women (65%) than men (45%) reported that they enjoyed reading in general and 69% of women reported enjoying reading more on a mobile device than in traditional print-based books. While not within the scope of the study, the authors do posit that the significant difference in reading on mobile devices between men and women may be cultural and stem from issues regarding the education and literacy of women and girls:

It is possible that these gender differences can be attributed, at least in part, to specific cultural factors that make mobile reading particularly appealing to women. In countries and communities where female education is still a contentious subject, reading on mobile phones may be more socially acceptable than reading physical books, since it appears no different from reading text messages, and other people cannot see the titles of the books (West & Chew, 2013,p. 46).

In addition to the guise of other activities that may be more socially acceptable than reading, mobile phones as conduits of information may also provide women and girls with access to texts that may not be deemed appropriate by family and community members, such as those addressing sexuality, reproductive issues, or other health related concerns.

In examining respondents' purposes for reading as found in the study, some surprising trends emerge. The most notable is the use of mobile phones to access books to read to children. Over 33% of those surveyed said that they used their mobile phones to read to their children, and 34% said that they would if more children's books were available. The surprise here is that the majority of these respondents were men. While that figure

may be linked to the overall ownership of mobile phones, it is distinct contrast to perceived gender roles and responsibilities towards child rearing. In any case, the use of mobile phones as a means of promoting early literacy in developing countries cannot be overlooked and is one area for further research.

While individuals of both genders utilized their mobile readers for a variety of purposes across many genres, trends in search terms and usage indicate that readers are most frequently searching for and reading romance novels, textbooks, short stories, global bestsellers, health information, career advice, religious materials most predominantly. Of those, romance, religion and educational materials are the most frequently accessed. While these finding may mirror perceived differences or stereotypes in reading preferences and topics between genders, it is also the case that the *Worldreader* app has a greater number of titles in these topic areas available and less in non-fiction or current affairs. This again, may be a topic for further research as more topics and genres become available across mobile reading applications.

Barriers to Mobile Reading

Despite the benefits associated with mobile reading and learning, there are barriers as well. Perhaps not unsurprisingly, the greatest perceived barriers to utilizing mobile phone for reading relate to connectivity, choice and cost of use. For younger readers (under the age of 19) and men, lack of desirable content was reported as the most frequent barrier to reading via mobile phone. 60 percent of men and 64 percent of young people found that the reading material available was not of primary interest, compared to 45 percent of women. These findings may not be surprising given the relatively small amount of non-fiction and even less material specifically targeted to a young adult (YA literature) audience. Additionally, most readers reported that they would like

to see more content written by local authors in local languages available. This is an important finding and speaks to one of the critiques around mobile reading – who determines the content, the purposes and the availability of texts in the mobile applications? As we will discuss later in this chapter, technology cannot be simply imported from one locale to another without consideration of local knowledge.

Second to limited content, mobile readers found that connectivity issues impacted their ability to read on their phones. 53 percent of all users cited frequent connectivity issues as an impediment to reading. While this is not surprising given the "cloud" based nature of the application, it does have implications for the impact of digital reading to extend the access and availability of text. Related to connectivity are issues of airtime costs incurred by mobile phone reading apps. Although determining an exact price for reading a book on a mobile phone is difficult due to variance in plans, locale, etc., it is estimated that the cost of reading a book through the *Worldreader* or similar programs is approximately two to three cents in US currency. While certainly a concern especially in countries with high poverty rates, the cost of reading a book on a mobile phone is much lower than the cost of an average print book. This is reflected in the 18 to 34 percent of respondents who reported worrying about airtime costs 'frequently' or 'sometimes' in the study.

While the findings of this robust study illuminate the ways in which mobile phones may be utilized to secure greater access for a greater number of people to a variety of books, it does not address mobile reading in libraries and formal education (school) settings. We turn now to the use of e-reader initiatives in developing countries. Similar to the research on mobile reading, the largest studies have been undertaken by NGO's and non-profit organizations. While this does not diminish the findings, their significance or the benefits achieved, it does present some particular issues related to power, access and the "top-down"

nature of these projects, especially in regard to local knowledge and culture. This is especially salient given the almost monopolizing influence of non-profit agencies such as *Worldreader*, especially when in partnership with global organizations such as UNESCO and USAID.

E-Reader Initiatives

Project LEAP

Project LEAP, which stands for "Libraries, e-Reading, Activities and Partnership," was a pilot program implemented by *Worldreader* in partnership with eight public and community libraries in Western Kenya, and funded by the Bill and Melinda Gates Foundation. LEAP tested the use, function and adoption of e- readers in the participating libraries in an effort to understand and investigate the potential and feasibility of library e-reader programs across Kenya and sub-Saharan Africa. One of the stated goals of this initiative was to increase reading through libraries, and therefore improve literacy skills and ameliorate the effects of illiteracy on poverty, health, gender equality and social and economic stability (Jaffe, Lowe, and Tam, 2014)

Early in 2014 *Worldreade*r contributed 200 e-readers (each preloaded with 200 digital book titles) to the selected pilot libraries, for a total of 40,000 books. In this study the following key findings were reported:

- Diversity and size of library collections and the need for more technology programs as priority concerns prior to the e-reader program initiative.
- Young people (determined in the study to be under the age of 25) were the primary users of the e-readers, and points to an important need to engage young people.
- Of almost equal importance to issues of access and availability, both library patrons and staff stressed the importance and value

of social interactions and the ability to discuss what was being read, and to obtain technical assistance when required.

Despite the numerous positive findings associated with LEAP, concerns and challenges also arose. One of the most prevalent concerns centered on access issues in rural areas. While it may be expected that larger urban centers would have greater numbers of patrons, and thus require a greater number of e-readers, rural areas tended to attract more people coming greater distances to read, only to find limited availability and access. Another challenge was to provide readers with texts written by African authors. While *Worldreader* has partnered with over one hundred African authors to digitize their work, the demand is still outpacing the supply and speaks to concerns around who has the power to determine what is available to readers in the developing world. Lastly, there was somewhat of a cultural "disconnect" between views on the value and place for printed text in societies where social interaction and oral storytelling are highly valued. This is in keeping with Totemeyer's (1994) observation:

Books and libraries are often seen as redundant in societies that are mainly based on oral traditions and practices. In such societies, people stop reading once formal education is completed as they derive more pleasure from the oral and performing arts – talking, singing, dancing, socializing – than from the rather private and individual reading of a book (p. 54).

What is interesting to note, then, is that even given the attractive (from a Global North perception) addition of technology in the form of e-readers, the mismatch between what is valued remains. We will discuss this at greater length later in this chapter, however, it is important to bear in mind the incongruity of practice and beliefs when technology becomes a placed resource that may

or may not take into consideration the hegemony involved in imposing practice not inherently a part of local practice.

iRead Ghana

Project LEAP examined the distribution of pre-loaded e-readers to both rural and urban libraries in locales through areas of Kenya. *iRead Ghana* represented the introduction of e-readers into the classes and curriculum of elementary schools in Ghana. The iREAD (Impact on Reading of E-Readers And Digital content) Ghana Study was a pilot study conducted from October 2010 to July 2011. It was categorized as a Global Development Alliance (GDA) program between the United States Agency for International Development (USAID) and *Worldreader,* as a non-profit organization. This study gave purposively sampled (n=481) Ghana public school students access to books through e-readers. While USAID and *Worldreader* conducted this study; ILC Africa, a private company, was responsible for monitoring and evaluation of the study as it progressed. The report is available at: http://www.worldreader.org/uploads/WorldreaderILCUSAIDiREADFinalReportJan-2012.pdf.

Generally speaking, the majority of students and teachers from the *iREAD Ghana* had positive experiences with the e-reader and expressed the belief that there is a place for digital media and e-reader technology in the Ghanaian school system. However, some negative effects were also reported, mainly from the teachers involved in the study. Figure 3 summarizes both positive and negative findings in this study.

The report concluded that there were positive effects from the short term to the long term in promoting both reading and literacy skills. Namely, the study concluded that:

In the short-term, students have immediate and reliable access to books for academic and personal

Figure 3. Successes and challenges of the iREAD Ghana project
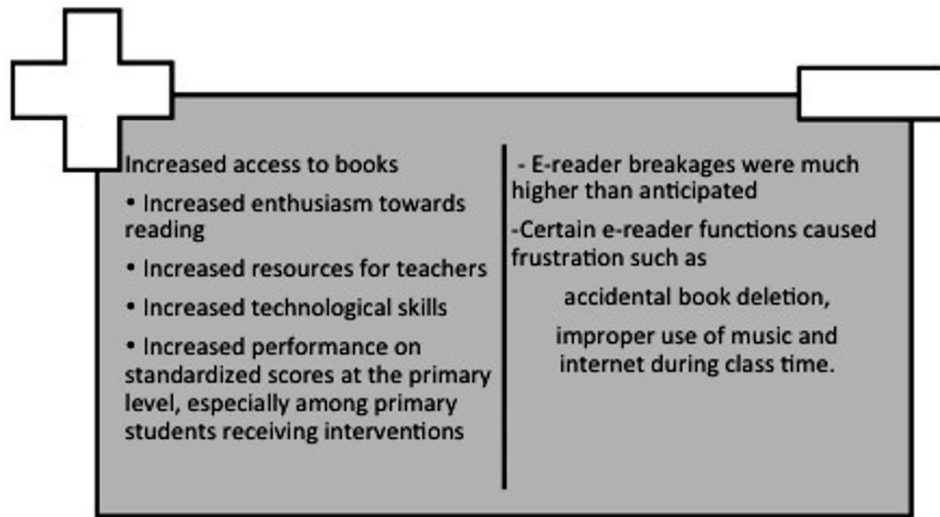
use, without having to depend on the traditional paper book system that is currently practiced. In the medium-term, student and teachers have access to reading materials and teaching resources that facilitate and significantly accelerate the learning process, since students are able to have direct access to information in a home setting. In the long-term, final evaluation data strongly suggest that when the device is introduced and managed properly among primary level students, it has the potential to improve reading performance, and more importantly increase enthusiasm for reading as a lifetime habit (p. 7).

While these are certainly laudable goals in promoting literacy, they do not take into account local knowledge or value the literacies that students bring to school. Thus, while benefits are apparent and measurable, the conclusions may once more raise the spectre of a monolithic portrayal of those in developing countries as being in need of the Global North's intervention. This stance becomes more apparent later in the study's report on socio-cultural limitations regarding language and what they term as "unsupportive home environments".

Note that the report negatively frames both the uses of other languages as well as home practices in agricultural communities that may place more importance on activities other than reading (emphasis added):

Socio-Cultural Limitations

- *English language limitations: While English is the official language of Ghana, it is the second language for most if not all project-affected students and teachers. English language limitations were especially significant for primary students who use English for the first time in primary class 4.*
- *Potentially unsupportive home environments: As many project-affected students are from agricultural families, **their home environments may not appreciate reading as an activity**. For example, students may spend more time at home performing family chores and agricultural tasks rather than engaging with their e-readers.*

*Additionally, students whose parents have limited English and literacy skills may be **unable to actively incorporate the device into home life**. (p. 22).*

Thus, we hear in this report that agricultural tasks are not seen as "literate" and parents with limited English are creating an environment for their children that is framed in the language of deficit. Moreover, the report takes to task the admirable efforts of *Worldreader* to provide books in the local language of study participants. Indeed, the final report disparages that the books may not be in what the report authors considered "standard" English:

Findings within this report demonstrate that many students had an affinity towards African reading material because it was representative of their culture. A concern, however, is that many of the locally authored texts had grammatical, syntactical, and typographical errors that do not present a positive model for young readers (p. 24).

Again, while initiatives such as *iRead Ghana* do provide greater access to literacy, we must ask whose literacies are being privileged? Earlier in this chapter we made the argument that literacy is tantamount to the realization of human rights especially for women and girls. However, it would also seem necessary to ensure that in attempting to secure those rights, we do not inadvertently engage in practices that subvert the values of societies that may not view literacy in the same way. We turn now to a discussion of the issues, such as this one, that arise when technology is transported as value-laden to various locales.

SOLUTIONS AND RECOMMENDATIONS

One of the issues raised by examining the role of digital media in contributing to the increased

literacy, and thus greater civic engagement of women and girls globally lies in the notion of digital technologies as placed resources (Prinsloo & Rowsell, 2012); as well as in the concept of a global "digital divide" which cannot be bridged simply by making technology available in distant locales. Bonny Norton and Carrie-Jane Williams point to "the growing body of work which suggests that digital resources are not directly transferable from well resourced to poorly resourced communities" (Norton & Williams, 2012, p. 315). While Prinsloo (2005) argues that new literacies cannot be transported to new locales and have their meaning, use, value or context simply reproduced:

At the level of practice, the new literacies are never reproduced in their entirety across different contexts. They function as artifacts and as signs that are embedded in local relations that are themselves shaped by larger social dynamics of power, status, access to resources and social mobility. They are placed resources. (Prinsloo 2005, p.96)

In making this argument, Prinsloo refutes the attractive generality and seamless transferability of skill-based new literacies such as the ability to "use the Internet and other ICT's to identify important questions, locate information, critically evaluate the usefulness of that information, synthesize information to answer questions, and then communicate the answers to others (Leu *et al*, 2004; p.1570). While these skills and may seem like a *panacea* for global illiteracy issues, they do not necessarily take in to account the situated and enculturated nature of of digital practice, especially as it pertains to literacy. Thus, Prinsloo's distinction is crucial to this review, as the majority of the extant literature are reports and other various publications by international NGOs and other organizations who may be more inclined to discuss the affordances for users of digital literacies in developing nations, but reluctant to discuss the "constraints that mark their status as persons

located on the globalised periphery (Prinsloo & Rowsell, 2012; p. 271). However, it is imperative not to view the notion of placed resources or the global digital divide as coming from a discourse of deficit or disadvantage. Rather, the research around new literacies and digital literacies/ technologies as placed resources allows for the exploration of possibilities when the settings of use are recognized rather than homogenized in function and affordance. Snyder and Prinsloo (2007) speak to this and encourage researchers and practitioners alike to attend to the variety and nuanced contexts in which people engage in digital media practices and resist the notion that availability of technology equates with access and equality:

When computers or other media are inserted in a particular setting, to bring about certain results, they encounter situated social practices that do not necessarily result in these resources being used in a way that promotes social development and participation, as might be conceived by the implementers. Digital divide logic overemphasizes the importance of the physical presence of computers and connectivity to the exclusion of other factors that allow people to use electronic media for meaningful ends. (Snyder & Prinsloo, 2007, p. 174).

In tandem to notion of digital media and literacies as placed resources, we must also consider the role of culture and what "counts" as knowledge and literacy to people in developing parts of the world. Mobile learning has been demonstrated to enhance and extend learning and related activities in various settings in many ways. Yet as Traxler (2013) posits, mobile learning may transmit certain cultural and pedagogical assumptions and values related to education inherent in Western models, that may not reflect the culture of the locales in which mobile reading has been placed. Questions such as, "What is worth learning?" "How is it to be learnt?" "Who can teach it?" "How can competence be expressed?" implicitly define that culture's conception of learning, and thus of knowing" (Traxler, 2013, p. 49).

Additionally, given that language and literacy are primary markers of a particular culture, there is often an uneasy tension between globally predominant languages such as English, and a local language and/or dialect. Indeed, education and enculturation are often synonymous with each other. Thus, there is a fine line between offering new technologies to be incorporated into existing cultures and social systems and imposing them in a manner which may subvert or replace them. As Traxler succinctly argues:

These technologies project the pedagogies, strictly speaking perhaps the epistemologies, of outsiders into communities that of course already have their own learning. There is a risk that mobile technologies delivering learning in this way represent either a Trojan horse or a cargo cult that threatens or undermines a fragile educational ecosystem. The issue is not one of emerging markets or developing regions per se but of fragile cultures (or sub-cultures or even counter cultures) and their capacity to negotiate an optimal balance between the preservation of language, heritage and culture on the one hand and engagement with the wider world and the global knowledge economy, on the other. (Traxler, 2013; p. 49)

It is in that delicate balance of local preservation and global engagement that may present the biggest challenge for mobile reading and e-reader initiatives as we move forward into new research. In doing so it is valuable to remain cognizant of their situated and contextualized use in ways that may further illuminate the affordance and challenges of digital media and literacies as placed resources.

FUTURE RESEARCH DIRECTIONS

At myworld.org, the United Nations is asking the public what priorities should be the future priorities for international development. In 2013, the top two choices were education at 27% and then ICT 22%. Education and technology are tools for personal empowerment and holistic development that should be available to females as well as males. In the past decade, there has been a rise in the number of mobile learning initiatives taking place around the world. Researchers have accepted the call to empower women and girls with the use of mobile devices. Projects have become more culturally appropriate than their predecessors, with attention to language and social norms of those communities and societies. However, this research is still relatively new with many areas remaining unexplored. Researchers need to draw from what knowledge we have gathered to offer communities and cultures richer learning opportunities. Researchers need to also learn from implementations that have not worked to support gender equality as well as the challenges and hurdles to working with individuals and communities in developing countries. This information will help to provide a depth to the collective understanding and toward the design of future successful mobile learning initiatives.

At UNESCO's Mobile Learning Week 2014, Traxler and Crompton (in press) conducted research to pull together the expert opinions of those attending the policy forum. One of the discussion topics focused on the ethics of research and Traxler and Crompton pointed out the Golden Rule vs. the Platinum Rule. The Golden Rule reminds us to treat others how we would wish to be treated, however, the Platinum Rule reminds us that how a person may wish to be treated may not be the same as what they would actually want due to cultural differences. As one participant stated:

Ethics are rules set out by a population. Most of the time those rules are coming from powerful societies pushing forward those rules as being 'good practice' or 'philosophically sound'. However, what works for some populations, might not work for others, and each context can have unexpected negative effects of well-meant ethical guidelines that are provided in a research project. As such ethical guidelines should have some freedom in their conceptualization, allowing the target population to provide their insights and their ethical views

As researchers travel to foreign countries, they need to remember the Platinum Rule and find out more about that country and what is and is not appropriate when conducting research.

To support researchers in conducting future research that is culturally respectful Traxler and Crompton (in press) posit that local researcher capacity is built. Furthermore, they point out that local researcher capacity will not only be culturally respectful but provide a more accurate understanding of local socio-cultural contexts in data collection and the final analysis. With this in mind, future research will benefit from local women and girls being involved in conducting the research in addition to the local women and girls who are the study participants. This will contribute to the transnational feminist discourse (Hesford & Kozol, 2005; Swarr & Nagar, 2010) that the women and girls are taking lead role in the research. This can be difficult in countries where research is not highly valued or a well-paid occupation, but this can be supported in the future as local women and girls can join outside research teams and be well compensated for their time.

A dominant concern for future research lies in the relative lack of scholarship investigating digital media as a vehicle for the literacy and rights of women and girls. Currently, the majority of the extant research is conducted by NGO's and/or non-profits, aligned with corporate interests (ie; *Nokia, Amazon*, etc.) Without negating the contributions made by these reports, it is difficult to ignore the inherent biases and interest served by them. While all research reflects the subjectivity of the author or entity conducting the research, there

is a noticeable gap in a critical or socio-cultural perspective reflected in the existing literature cited here. Indeed, very little attention is given to the particularities of context or participants. Likewise, it is difficult to determine what, if any local voice, experience and input may have been contributed or even solicited. Thus, there is a profound need for more independent research especially that which is context –based around access and equality to digital media and the variety of literacies afforded by it. Indeed, as Traxler (2013) argues, the pervasiveness and ubiquitous nature of mobile devices and the learning made possible through them, also potentially devalues the pedagogical when "there is an app for that." Where then, is the place for expert, long-term professional development and mentoring. Traxler posits that when content alone is privileged:

There is a risk that the role and impact of the research community becomes marginal. This is important because as we use mobiles for international development (italics in the original) we will encounter and probably ignore local theories of learning, theories embedded in their traditions and culture and expressing their ideas about what to learn, where, when and why, and how to learn, and who from (p.58).

Traxler sees this as a risk because it denies the opportunity to learn from and with other cultures and traditions while assuming that pedagogy will keep track with technology. This notion of pedagogy and "who decides" how and what to learn, who from and what is worth knowing brings us to our next issue for further study.

Another key issues related to mobile learning and digital media is the notion of who decides content to be shared, how to share it and to what extent (if any) is local knowledge and context solicited and represented in the content. In the case of BYOT or individuals selecting which apps to use, how and why, the question may not be as important. However, in the case of initiatives where the content of mobile readers is predetermined and or can be user selected albeit from a predetermined "library", there does seem to be a pronounced risk of imposing a Global North perspective, rather than a local one. Similarly, questions of perception regarding the "developer" and the "developing" may inadvertently re-ascribe age-old power relationships between North and South.

As Prinsloo and Rowsell (2012) state, "it is only through a situated and local account of digital praxis can we begin to see tensions, power imbalances and, at the same time, idiosyncratic use and understanding of the digital" (p.274). Those power imbalances become more complex and problematic when gender is also considered, especially in regard to who is heard and who is not. Judith Butler (1990) reminds us, "what qualifies as 'gender' …attests to a pervasively normative operation of power" (p. xxi). This operation of power is still very much evident in digital context, perhaps in some ways, even exacerbated due to issues of access. Additional research is needed then in regard to how gender is enacted across individual and group contexts in digital spaces (Krasny, 2013). Moreover, Krasny states there is a need for research "investigating the extent to which electronic texts fulfills its promise of providing for gender-free communication and whether virtual learning environments allow for more equitable gender participation" (p. 65). In exploring these issues among others raised in this volume, the potential for digital media and mobile learning to address the human rights and literacy for women and girls globally may begin to be realized.

CONCLUSION

In this chapter we reviewed the relatively recent advances in combating illiteracy and lack of access to a variety of resources through mobile

learning and e-reading initiatives. In doing so, we utilized the lens of transnational feminism and human rights discourse to both illuminate and problematize those advances, especially as they relate to women and girls globally. The role of transnational feminisms in critiquing human rights discourse as well as the methods and objectives of NGOs is invaluable in examining what role digital media, mobile reading, and the use of e-readers may have in promoting literacy and human rights for women and girls. Most salient to these critiques, especially as they relate to corporate and NGO involvement and influence is the risk of privileging the Global North's perspectives and interests over local cultures, customs and values. Additionally, it must be remembered and bears reiteration that access is not synonymous with equity, especially for women and girls in the so-termed "developing world".

Thus in considering the potential for digital media and the variety of mobile learning initiatives now in practice, we offer the following as recommendations, realizing that the implications of widely used mobile reading and learning are continuing to grow exponentially:

- Consider the power dynamics in providing supportive interventions. Researchers from developed countries need to be cognizant of perceptions of power especially when working with people in developing countries.
- Consider the role of women and girls in mobile learning initiatives to play the part of the provider (the interventionist) as well as the participants in these studies. This will avoid the perceptions of men having the power in conducting the research.
- Empathize with women and girls respecting local cultures and practices. This will ensure that they are treated in a way they would like to be treated and not how the researchers, who are probably from a different culture, would like to be treated.

- Identify ways to normalize technology use with women and girls. Create a culture of technology ownership and use. This may seem contradictory to earlier points about respecting the local culture, however, there are times when local cultures may be exacerbating oppressive ideas that women and girls are less important to their male counterparts. For example, the Pink Phone Project in Cambodia was used to show the local people that phones were not just a device for the male population.
- Develop strategies of technology use to promote literacy in women and girls. Connect these strategies with positive culturally relevant practices. In this chapter, there are many examples of literacy initiatives connecting to cultural norms. A good example was the Mobile Literacy program in Afghanistan. In this study women were learning basic literacy skills by receiving SMS messages that contained topics such as Islamic teaching, food recipes, beauty tips, and health facts that would be interesting and relevant to the women in the study.
- Learn from failed projects and why they failed. It is important to share details of studies that have not worked and why they did not work as this will avoid researchers wasting time on projects that have failed in the past. Instead, the researchers can learn from past research failures to instead direct their efforts to initiatives that may be successful.
- Remember that projects that worked in one community will not necessarily work in other communities that appear similar. One of the main themes from this work is that what will work for women and girls in one community may not necessarily work for women and girls in another community. Even as researchers work with a population in the same country, each city, town, and village may be different.

In conclusion, we look to the promise of mobile learning, digital media and initiatives to promote equitable access to literacy and other human rights, but we do so with a sense of caution and remain cognizant that the potential for hegemony often walks beside even the noblest of intentions. However, as girls and women continue to exercise agency to alter the status quo, we are reminded of a poem written by a 15 year-old girl called "Luckline", who sued her government for failing to protect her from her rapist (Armstrong, 2014, p. 34-35):

Here I Come

Walking down through history to eternity

From paradise to the city of goods

Victorious, glorious, serious and pious

Elegant, full of grace and truth

The centerpiece and masterpiece of literature

Glowing, growing and flowing

Here, there, everywhere

Cheering millions everyday

The book of books that I am

For all women and girls, victorious, glorious, serious and pious, we dedicate this review in the hope for the full and ultimate realization of their rights as humans and global citizens.

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KEY TERMS AND DEFINITIONS

Education for All (EFA): A UNESCO initiative and global commitment to provide quality basic education for all children, youth and adults. At the World Education Forum (Dakar, 2000), 164 governments pledged to achieve EFA and identified six goals to be met by 2015.

Globalization: A condition of the permeability of social, economic and political borders. It is characterized by the extensive movement or flow of information, ideas, images, capital, and people across increasingly permeable political borders due to economic and technological change.

Human Rights: The idea of human rights recognized today was established with the United Nation's *Universal Declaration of Human Rights* (UDHR) in 1948 written after the Second World War. The primary intent of the document was to prevent a recurrence of the human rights travesties that occurred during WWII. However, the UDHR also provides for the recognition of 30 human rights, including the right to education.

Literacy: Literacy is a human right, a tool of personal empowerment through expression as well as a means to social, cultural and human development. Broadly defined, it is the ability to read, comprehend and act upon a variety of texts and contexts.

Mobile Learning: The utilization of mobile devices to provide learning to those who have been previously unable to access traditional learning opportunities for reasons of location, finance, disability, or infrastructure.

Non-Government Organization (NGO): A citizen-based association that operates independent of governments, typically to deliver resources or serve a social or political purpose. NGOs may be classified as either operational NGOs, which usually address development projects, or advocacy NGOs, which are concerned with promoting a cause.

Transnational Feminisms: This wave of feminism has emerged largely as a response to international and global feminism. It speaks to the hegemonic and monolithic portrayal of "Third World women" as passive victims. Instead, it aims to recast and highlight activism and agency in such a way that transnational solidarity and collaborations can be reached.