

HOW MOBILE LEARNING INITIATIVES CAN EMPOWER WOMEN

Helen CROMPTON (PhD)
Assistant Professor of Instructional Technology
Department of Teaching & Learning
Darden College of Education, Old Dominion University
Norfolk, VA 23529 Virginia, USA

ABSTRACT

The Sustainable Development Goal 5 provides a call to action to promote gender equality and to empower women. This article responds to that call by providing insight into how mobile learning initiatives have been used to support that aim. A critical analysis is conducted of studies in the past decade to review what strategies have been effective in empowering women. The analysis revealed that initiatives were targeted towards three areas: Education, health, and financial empowerment.

Findings show that in certain topics women should play an active role to further the empowerment process. This article also aligns with Objective 4 of the ITU-D Global Development Objectives (2015-2018) to build human capacity as this analysis will give leaders, policy makers, and researchers' insight into what should be the focus for future endeavors to enable women to be active and equally important members of the community.

Keywords: Technology, learning, mobile, mobile learning.

INTRODUCTION

Gender disparity in many developing countries has resulted in women having a lack of access to many human rights that males take for granted. This disparity has stemmed from cultural norms involving religion, traditions, and customs that limit or exclude many educational, workforce and social opportunities. This has greatly restricted the human capacity in those countries as only the males are empowered with skills, knowledge and access to build that country.

Reducing the gender gap is one of the topics at the forefront of the UNs efforts. The fifth goal in the set of 17 Sustainable Development Goals (SDG, 2015) was to achieve gender equality and empower all women and girls. This target included gender parity in education and the labour market. The ITU-D also seeks to build human capacity through strategies for both men and women, such as information and resource sharing, and the delivery of ICT learning, training and development. In response to calls such as these, many researchers have sought to reduce or remove the gender gap by developing initiatives that use mobile devices to provide these opportunities to women. Mobile devices can be used to provide access to this knowledge and training.

PURPOSE OF THIS PUBLICATION

This paper highlights some of the strategies used in mobile learning initiatives in the past decade and their efficacy in accomplishing this task. This critical analysis of studies will give leaders, policy makers, and researchers' insight into what should be the focus for future endeavors to enable women to be active and equally important members of the community.

ANALYTICAL FRAMEWORK: DEFINING THE KEY CONCEPTS

Mobile Learning

Mobile learning is using mobile devices, such as mobile phones (basic/smart) and tablets, to gain access to knowledge and skills.

Gender Gap

The gender gap describes the discrepancy in opportunities, status, and values between men and women. For some values the gender gap can also be quantitatively calculated. For example, to quantify the gender gap in mobile phone ownership in developing countries this would be calculated by subtracting the number of male mobile phone owners from women mobile phone owners and dividing by the male mobile phone owners. A diagrammatic visualization of this equation is included in Figure 1.

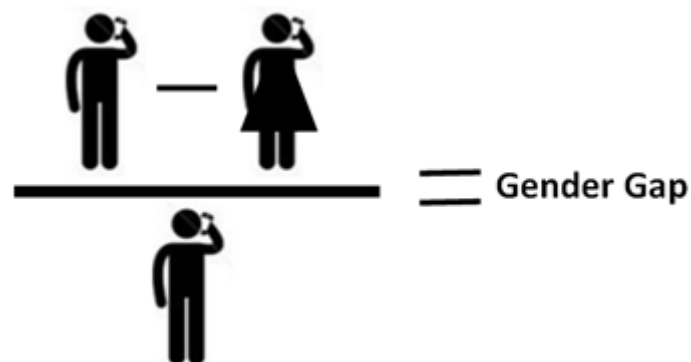


Figure 1.
Calculating the gender gap in mobile phone ownership.

Work to Support Empowerment

There have been various mobile device initiatives intended to empower women. In 2010 the GSMA conducted a report on some of these initiatives and stated that future research should be conducted to identify how mobile devices can be used to empower women. A GSMA report in 2015 repeated that call asking for research to be conducted to find the most effective methodologies and content. It is important to learn from those who have conducted studies in the past to learn from their successes and mistakes. Recent research reports that the dramatic spread of mobile phones is not enough to achieve empowerment of women (WWW Foundation, 2015).

By conducting this critical analysis of studies and reporting what is effective will greatly assist in the development of successful initiatives going forward.

Challenges to Empowerment

Mobile devices can be used to provide access to knowledge and training. However, recent reports show that over 1.7 billion females don't own mobile phones in low and middle income countries, placing females 14% less likely to have a mobile phone than males (GSMA, 2015).

The cost of the device may appear an obvious challenge in these countries, but is not necessarily the largest or the most difficult challenge to overcome. From a review of the literature, the gender challenges reported can be separated into two overarching categories: innate traits and sociocultural influence.

Gender challenges due to innate traits are those perceived nuances of women that would hinder them from using mobile devices.

In 1994, researchers in North America observed that women were not as quick as men in using ICT (e.g. Dholakia, Dohlakia, & Pedersen, 1994).

In recent years, it is argued that women generally have a negative attitude towards technology (Verank, 2007). In the final declaration of the United Nations World Summit on the Information Society (WSIS, 2005) a declaration was made that states there is a need for “enhancing communication and media literacy for women with a view to building the capacity of girls and women to understand and to develop ICT content.”

This appears to be saying that women are less capable at understanding and developing ICT content. A change in how women are perceived is necessary and statements could instead point out that the cause of the discrepancy is due to the inequalities in the treatment of women.

Sociocultural barriers to empowerment are those connected with religion, traditions, and customs that make a difference to employment, education, and income. For example, if the customs and traditions define the females’ role in caring for the family and the role of the male is to gain employment to provide income for the family, the female is not provided the opportunity to be financially independent.

Hilbert (2011) conducted a study that controlled for employment, education, and income to find out if women would use ICTs if they were not culturally inhibited from doing so. The findings showed that women are more active users of ICT than men when given the opportunity. This shows that ICTs can provide a tangible opportunity to overcome the gender gap by providing access to employment, income, and education.

Topics supported

From the analysis of studies conducted in the past decade, education, health and finance were three overarching topics commonly used to empower women. These are explained further in Table 1:

Table 1:
Focus of Initiatives to Empower Women

Topic Area	Description
Education	These initiatives focused on primary education covering content such as literacy. It also covers topics in getting access to continued primary education.
Health	These initiatives focused on information and advice about health issues. It also includes access to general communication as part of psychological health and well-being.
Finance	These initiatives focused on the promotion of finances. This includes access to commodity information and opportunities for entrepreneurialism.

These topics are not surprising as they connect with many UN goals. As well as empowering women and girls SDG 5, they also overlap with SDG 4 in ensuring inclusive and quality education for all and promote lifelong learning and the health related goal of SDG 3. Looking broadly at these three topics, they are all different ways to increase knowledge which leads to empowerment. To provide examples of the knowledge

provided, for education, the Mobilink (UNESCO, 2012) initiative boosts women’s literacy knowledge in Pakistan.

For health, MAMA South Africa (2013) is an initiative organized by the Mobile Alliance for Maternal Action that provides information to pregnant women during the course of pregnancy, childbirth and until the child’s first birthday.

To boost knowledge in finance, the Self Employed Women’s Association (SEWA) in India sends SMS messages to agricultural workers on up-to-date commodity prices so these women can make good crop planning and harvesting decisions (Nanavaty, 2011).

Of the three main topics (education, health, and finance), information is often in text and women need to have basic literacy skills to gain access to that knowledge. There are a number of mobile learning literacy initiatives for men and women, but there are a small number that specifically focus on improve literacy skills for women.

This number needs to be extended to provide more women literacy skills that will enable them to take advantage of the other opportunities. Few mobile initiatives focus on numeracy skills and again these skills are necessary for women to take best advantage of financial initiatives and opportunities.

For example, for the SEWA initiative, there is information provided on commodity prices, but if the numerical knowledge is lacking, these women may not be able to make best use of this information.

Strategies to Empowerment

To empower women, there have been various strategies implemented. These strategies depend on what access to mobile devices and network coverage the women have and topics they are intended to support. Overarching themes were compiled into Figure 2 to show the strategies the majority of researchers took to empowerment women. The first focus is determining accessibility to resources, next the topic and strategy are listed.

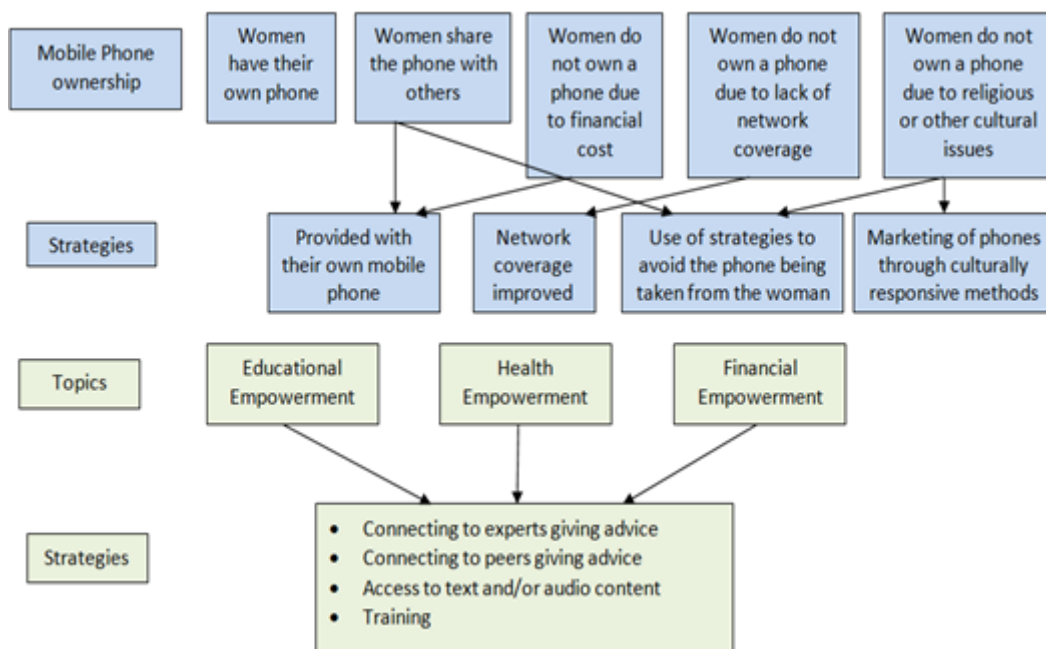


Figure 2:
Strategies for education, health and financial empowerment.

Ownership of a Mobile Device

If the women do not own a mobile device due to financial cost or network coverage, various strategies are implemented to improve that access. For women who do not own a phone due to religious or other cultural traditions the strategies are more creative to enable women to gain access. In many rural areas of Cambodia, women often share phones with other family members. However, domestic violence towards women is commonplace in these areas and males typically have charge of the mobile phones. Oxfam implemented an initiative called the Pink Phone Project (Microfinance & Development, 2014) which provided women with mobile phones painted pink. This color discouraged men from using the project phones and empowered women with ownership.

For places where women are culturally discouraged from using mobile phones the Banglalink: Ladies First initiative (GSMA, 2010) advertises to women showing themselves in aspirational, positive and empowered images, rather than the typical stereotypical roles. However, interestingly the informational services that come with phone connectivity seem to be focusing back to the stereotypical role with cooking tips and first aid.

Key Strategies

The analysis of studies revealed four main strategies for empowering women with knowledge in education, health and finances (see Figure 2). These strategies are all focused on different ways of having the learner gain that knowledge. The majority of the strategies were focused on delivering the content to the learner where the women are passively receiving content. An example of an initiative that fit within the delivery of text and/or audio content would be the SEWA initiative that sent SMS messages on commodity prices. The communication is one way. The GSMA (2010) described this initiative as positive as "opening the door to increased income will open the door to increased mobile phone adoption and usage" (p. 39). This could be a way to empower women as they get access to knowledge that can increase income. Nonetheless, these women are given this knowledge as passive recipients.

Perhaps another way to improve on this is to have these women supporting each other in a continued conversation about the commodity prices. Perhaps these women can give further information or perhaps future predications of those prices based on information they have that they can share with others. The primary purpose of mobile phones are to communicate with a two way conversation and it would also be beneficial to that empowerment if these women had an active role in the learning and empowerment process.

The designers of the Jokko Initiative in Senegal understood the need for women to be active participants in the learning process. Jokko is a fitting name as it means communication in the local language. In this initiative, the women in the community are connected by a SMS network. Messages sent to this SMS group are received by all the women in the community. To improve literacy skills and empower women, they are encouraged to send out messages on a range of topics which include birth/deaths, events, and commodity advertising. Other initiatives focus on empowering women/improving literacy by sending out SMS messages and having the women respond back to the instructor (e.g. the Mobilink initiative: UNESCO, 2012).

But research on learning shows that learning is going to be more effective when these women are actively involved and the topics are relevant to their everyday lives (Wright, 2015). Communication was specifically described in two of the four strategies: Connecting to experts giving advice, and connecting to peers giving advice. As discussed, peers actively having the opportunity to give advice are a positive way to self-empower

women. An example of how women have been financially empowered through active participation can be found with the UN Women's mobile learning platform iLearn (United Nations in South Africa, 2015). This platform is free to women in South Africa and provides a place where women entrepreneurs can share their stories behind their business plan, their successes and challenges and the skills they acquired during the process.

The effective empowerment of women may depend on the topic to be learned and perhaps in some situations expert advice is needed rather than peer dialogue. In a recent initiative, IMImobile, BBC Media Action and The Gates Foundation are providing free mobile health education services to people in India. This includes the Kilhari service that delivers audio messages to women who have subscribed to the service. These messages provide health information for mother and child up to one year old. This follows a similar initiative in Timor Leste which also sent out messages to pregnant women and up to the child's first birthday. Before these initiatives began, many women were taking advice from friends and family members and high mortality rates resulted. These are examples where expert medical information are important in empowering the women and when advice from local family and friends may not be as beneficial.

The majority of the initiatives in the past decade have used SMS to empower women. This is important in many low income developing countries where the cost of phones are barriers to access. These locations often have the largest gender gap in terms of access to information and connectivity. Nonetheless, there are women facing the gender gap in middle income countries who do have phones and would also benefit from empowerment that could involve basic or smart phones. In the critical analysis of empowerment studies, the lack of female mobile phone ownership was due to various factors and not just financial cost and a lack of network coverage. A woman may not have a mobile device because of religious or other cultural traditions. It would be beneficial to see more initiatives to empower these women.

CONCLUSION

A critical review was conducted of mobile learning initiatives in the past decade that have the goal of empowering women. Three overarching topics emerged from the analysis, these were: Education, health, and finance. These matched the many SDGs outlined by the UN. These topics all provided knowledge relevant to the women targeted that would lead to empowerment. In the critical analysis of the strategies, four main topics emerged.

A number of representative initiatives were provided to show specifically the types of strategies used. From this analysis, it appears that some strategies may be more beneficial. For example, when women are provided an active role in the knowledge exchange this can lead to greater empowerment rather than passive consumers of knowledge to empower.

What is also clear is the method by which the women are best empowered is dependent on the topic, with expert opinions more beneficial in health related issues than opinions of family and friends. This paper provides leaders, policy makers, and researchers' insight into strategies for future endeavors to empower women to be active and equally important members of the community.

BIODATA and CONTACT ADDRESSES of the AUTHORS

Helen CROMPTON (PhD) is an Assistant Professor of Instructional Technology at Old Dominion University, Virginia. She gained her PhD in educational technology and mathematics education from the University of North Carolina at Chapel Hill. Her research is focused on mobile learning and the effective integration of technology into K-12 education. Dr. Crompton works as a consultant for two United Nations Agencies (United Nations, Educational, Scientific, and Cultural Organization: UNESCO and International Telecommunication Union: ITU) to research, author and edit publications summarizing research on mobile learning. Dr. Crompton is also a faculty member for the International Society for Technology in Education (ISTE), teaching the ISTE Standards academy, consulting, and recently designing ISTE's self-paced Mobile Learning Academy and Verizon's Mobile Learning Academy.

Dr. Crompton holds various awards in the U.S. and England, her home country, for her service to the field of educational technology and the innovative ways she has extended the boundaries of traditional pedagogies with the effective integration of technology. These awards include two awards from the British Educational Communications Agency (BECTA), the NAACE MARK and the National ICT Mark as well as the 2012, 2013, and 2014 Presidents Volunteer Service award for her work in mobile learning.

Helen CROMPTON (PhD)
Assistant Professor of Instructional Technology
Department of Teaching & Learning, Darden College of Education,
Old Dominion University, Norfolk, VA 23529 Virginia, USA
Telephone: 757 683 7076
URL: <http://ww2.odu.edu/~hcrompto>
Email: Crompton@odu.edu

REFERENCES

Dholakia, R. R., Dohlakia, N., & Pedersen, B. (1994). Putting a byte in the gender gap. *American Demographics*, 16(12), 20.

GSMA. (2010). Women & mobile: A global opportunity. In GSMA, *Connected Women 2015*. Retrieved March 23, 2016, from <http://www.cherieblairfoundation.org/women-and-mobile-a-global-opportunity>

GSMA. (2015). Bridging the gender gap: Mobile access and usage in low and middle-income countries. In GSMA, *Connected Women 2015*. Retrieved March 20, 2016, from http://www.gsma.com/connectedwomen/wp-content/uploads/2015/02/GSM0001_02252015_GSMAReport_FINAL-WEB-spreads.pdf

MAMA. (2013). MomConnect. Retrieved March 19, 2016, from <http://www.mobilemamaalliance.org/mama-south-africa>

Microfinance, & Development. (2014). Oxfam's Pink Phone Revolution project in Cambodia. Microfinance and Development. Retrieved March 20, 2016, from <https://mfd2014rmit.wordpress.com/2014/05/13/oxfams-pink-phone-revolution-project-in-cambodia>

Millennium Project. (2000). Millennium Goals. Retrieved March 15, 2016, from <http://www.unmillenniumproject.org/goals>

Nanavaty, R. (2011). The value of information: Mobile technology helps micro-entrepreneurs. Digital Development Debates. Retrieved March 20, 2016, from <http://www.digital-development-debates.org/issue-06-innovation--science-and-technology--the-value-of-information-mobile-technology-helps-micro-entrepreneurs.html>

SEWA. (2011). Digital development debates: The value of information: Mobile technology helps micro-entrepreneurs (DDD #06 innovation). Retrieved March 19, 2016, from <http://www.digital-development-debates.org/issue-06-innovation--science-and-technology--the-value-of-information-mobile-technology-helps-micro-entrepreneurs.html>

UNESCO. (2012). Mobilink: Mobile-based post literacy program. Retrieved March 17, 2016, from <http://www.unesco.org/uil/litbase/?menu=14&programme=125>

United Nations in South Africa. (2015, July 1). Un Women's mobile learning platform iLearn accessible for free to the women of South Africa [Press release]. Retrieved March 29, 2016, from <http://www.un.org.za/un-womens-mobile-learning-platform-ilearn-accessible-for-free-to-the-women-of-south-africa>

Verank, I. (2007). Effectiveness of quantitative skills, qualitative skills, and gender in determining computer skills and attitudes: A causal analysis. *The Clearing House*, 81(2), 71-80.

World Wide Web Foundation (WWW Foundation). (2015). Women's rights online: Translating access into empowerment. In *Global Report October 2015*. Retrieved March 19, 2016, from <http://webfoundation.org/wp-content/uploads/2015/10/womens-rights-online21102015.pdf>

Wright, D. E. (2015). *Active Learning*. [electronic resource]: Social Justice Education and Participatory Action Research. Hoboken: Taylor and Francis, 2015.