GLOBAL INFORMATION SOCIETY WATCH 2009

Focus on access to online information and knowledge – advancing human rights and democracy

Association for Progressive Communications (APC)
and Humanist Institute for Cooperation with Developing Countries (Hivos)

Global Information Society Watch 2009

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Dedicated to A.K. Mahan - an activist who valued intellectual rigour and concrete outcomes.

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Access to educational materials

Steve Vosloo
Shuttleworth Foundation
www.shuttleworthfoundation.org

Introduction

There are many factors affecting access to online educational materials, such as the cost of the materials, the cost of access, restrictive copyright licences, language, and local relevance of the content. These are broad and ongoing issues, with gains slowly being made to allow more access for more school and university students around the world. In developed countries, affordable broadband is creating a truly information-rich learning environment for students. It is possible to find information on most topics very easily and quickly. In this environment, skills such as information literacy, critical reading and problem solving become important.

For too many students in the developing world, access remains limited. In the 21st century, where being networked is essential to learning, working and playing in the information society, the lack of access directly undermines the universal right to education. One emerging trend could play a part in changing this: the rise of the mobile phone. Of course, the physical platform of access – the phone – is only one piece of a complex puzzle, but it is of such a disruptive nature that it could significantly move access to information a few steps closer to being a universally enjoyed right.

The mobile revolution

The staggering uptake of mobile phones – in terms of speed of adoption and number of users – has surprised even the greatest of techno-optimists. While universally accepted figures are difficult to obtain, it was reported that by the end of 2008, worldwide mobile cellular subscribers would reach the four billion mark.[1] A full 1.3 billion of those subscribers would come from the BRIC countries (Brazil, Russia, India and China), which were driving the bulk of the growth in adoption. In the same year it was also reported that Africa was the world's fastest growing mobile market.[2]

The International Telecommunication Union (ITU) cautions that these figures need to be "carefully interpreted" (which is outside the scope of this paper), but the overall gist is understood: the mobile revolution has happened, and is here to stay. When understood in the context of around one billion people accessing the internet, the revolution becomes even more significant.

What is m-learning?

What does it mean for education and access to online educational materials when it is claimed that for every personal computer (PC) there are four mobile phones?[3] The emergent field of mobile learning, or m-learning, has been trying to answer that question (even while struggling to define itself in a field that is constantly evolving). Initial definitions focused exclusively on the device itself, presenting m-learning as any learning that happened through a personal digital assistant (PDA) or mobile phone. This view is problematic; it is the equivalent of focussing on the physical object of a book, and not the content it holds. Over the years, more mature definitions have emerged that focus on issues such as mobility, and on how "personal mobile and wireless devices can enhance, transform and extend learning, teaching, assessment and administration."[4] Added to that are opportunities for creative expression, social networking and identity development, to name but a few.

M-learning offers characteristics of "ownership, informality, mobility, and context that will always be inaccessible to conventional tethered e-learning".[5] Clearly m-learning is not just e-learning that has gone for a walk, but something rather different. Mobile phones are personal, part of our emotional lives and almost always with us. Through mobile phones, access begins to be conceived in terms of "just-in-time" and "just-for-me" learning. For this reason, Traxler posits that "it is entirely possible that the emergence of mobile learning in developing countries will take the evolution of e-learning along a trajectory that is very different from that in developed countries, where it has been predicated on massive, static, and stable resources"[6] – an exciting prospect.

Opportunities of m-learning

Many opportunities exist for m-learning to increase the reach and depth of access to online educational materials – too many to cover here. Four key issues stand out and are worth mentioning: mobility, or being able to access and

1 International Telecommunication Union (ITU) (2008) Worldwide mobile cellular subscribers to reach 4 billion mark late 2008. www.itu.int/newsroom/press_releases/2008/29.html

2 Reed, M. (2008) Africa, World's Fastest Growing Mobile Market. allafrica.com/stories/200804280943.html

3 Ahonen, T. (2008) *Mobile as 7th of the Mass Media: Cellphone, cameraphone, iPhone, smartphone*, Futuretext, London.

4 Roberts, C. (n.d.), cited in Traxler, J. and Sugden, D. (2007) *Why Go Mobile? An Overview of Mobile and Wireless Learning*. www.jisc.ac.uk/media/documents/programmes/elearninginnovation/session1_jtds_whygomobile.pdf

5 Traxler, J. (2009) Current State of Mobile Learning, in Ally, M. (ed.) *Mobile Learning: Transforming the delivery of education and training*, Athabasca University Press, Edmonton, p. 9-24.

6 Ibid.

share information from anywhere (where there is coverage, of course) and at any time; the pervasiveness of the device (for example, compared to the number of PCs in telecentres or schools); the ability to access not only materials but people, fully exploiting the communication feature of phones in the service of education; and the potential of the phone as a device for content creation.

In addition to the texting that happens on phones, many phones today have cameras that can take still images as well as video. Many phones can also play audio files and have radio. Increasingly, even lower-end handsets have general packet radio service (GPRS) capability, allowing for internet access and web browsing. Mobile instant messaging (MIM), through services such as MXit or mig33, is becoming popular with the youth on phones such as these. In South Africa alone, MXit claims a user base of 14 million.[7]

One project that has captured the learning opportunities provided by mobile phones is Dr Math, which is set up on the MXit platform in South Africa. This service provides maths tutoring – from live tutors – via MIM to anybody about any school maths question, from 14:00 to 22:00 on Sunday to Thursday. Using chat, learners can be tutored at night in their rooms. It is a very affordable and effective learning service (one tutor can help up to 50 learners in an hour), providing just-in-time support.

Challenges of m-learning

While the educational potential of m-learning is enormous, a number of key challenges need to be overcome.

Poor user experience and un-optimised content

For someone who has access to the internet only through their mobile phone, the experience is hugely empowering. But the small screen and non-QWERTY keyboard interface of most phones limits that interaction. Certain content types – bite-sized and just-in-time – favour this interface. However, much of the existing online educational materials will need to be reformatted or repurposed to make them mobile friendly.

Language and localisation of content

The perennial issues of too much English learning material and not enough in other languages, as well as a lack of local content – or locally adapted content – still pervade the access debate. The mobile phone alone cannot rectify this imbalance. But when viewing the phone as a content-creation device, it can empower users to generate and share local content. Furthermore, because phones are ideally suited to accessing locally relevant and timely information, the incentive to generate this content – for content providers and local citizens – is increased.

Costs

Mobile tariffs are still too high in developing countries, especially because most citizens pre-pay for their usage, which is more expensive than contract rates. There is even some research that suggests that "mobiles are doing more economic harm than good, and sometimes making poor people poorer,"[8] because they spend too much of their income on mobile communication. There is much work to be done to lobby network operators throughout Africa to reduce tariffs, and for handsets to become cheaper. As an interim measure, network operators could zero-rate data costs for access to educational sites, and reduce short message service (SMS) costs for educational purposes.

Conclusion

The discussion of access to educational materials within the context of mobile phones is very broad in scope, and we have touched on only some of the issues. While the field of m-learning is still emergent, there are enough innovative examples that have demonstrated the potential that mobile phones have for increasing not only access to educational materials, but also the power to create and share these materials in the developing world. Going forward, we should think carefully about how to exploit the pervasiveness of mobile phones, and about how their features – their unique content and services – provide new ways to educate and learn. ■

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GLOBAL INFORMATION SOCIETY WATCH 2009

GLOBAL INFORMATION SOCIETY WATCH (GISWatch) 2009 is the third in a series of yearly reports critically covering the state of the information society *from the perspectives of civil society organisations across the world.*

GISWatch has three interrelated goals:

- **Surveying** the state of the field of information and communications technology (ICT) policy at the local and global levels
- **Encouraging** critical debate
- **Strengthening** networking and advocacy for a just, inclusive information society.

Each year the report focuses on a particular theme. **GISWatch 2009** focuses on *access to online information and knowledge – advancing human rights and democracy.* It includes several thematic reports dealing with key issues in the field, as well as an institutional overview and a reflection on indicators that track access to information and knowledge. There is also an innovative section on visual mapping of global rights and political crises.

In addition, 48 country reports analyse the status of access to online information and knowledge in countries as diverse as the Democratic Republic of Congo, Mexico, Switzerland and Kazakhstan, while six regional overviews offer a bird's eye perspective on regional trends.

GISWatch is a joint initiative of the Association for Progressive Communications (APC) and the Humanist Institute for Cooperation with Developing Countries (Hivos).

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