Challenges and policy options

By John Traxler

The progress and the challenges

It has been noted how lifelong learning plays a powerful role in enabling individuals and nations to reach their full potential. Without widening and deepening access to lifelong learning it will be increasingly hard to meet the challenges of the Education for All goals and adapt our economies and lifestyles to take account of climate change. The article will discuss the recommendations at the end of each of the earlier articles and articulate the reservations and limitations that come along with such recommendations. It is often tempting to make recommendations for *low-hanging-fruit*, for *quick-easy-wins.* This too is understandable since these create early credibility and momentum, and a straightforward account of cause-and-effect, but they should be integrated within a wider, more coherent and consistent framework and direction. This is not straightforward. Our incomplete examples, experiences and evidence will always support a variety of different interpretations and apparently plausible explanations that persuade us to construct the rationale and the narrative and discard the anecdote and the accidental.

A publication in 2005 from the Commonwealth of Learning, *Mobile Learning in Developing Countries*[1], sketched many of the possibilities and challenges, saying

> *"Mobile learning, or m-learning, is a personal, unobtrusive, spontaneous, "anytime, anywhere" way to learn and to access educational tools and material that enlarges access to education for all. It reinforces learners' sense of ownership of the learning experience, offering them flexibility in how, when and where they learn. In developing countries, mobile technologies potentially deliver education without dependence on an extensive traditional communications infrastructure, leap-frogging some of the intervening development phases encountered in developed countries such as installing extensive electricity power grids, and building multiple computer rooms in educational institutions."*

The subsequent decade has not seen the progress that this publication suggested was so obvious and attractive. It has seen a wealth of pilots and projects but these may not have produced the evidence base that would change commercial or ministerial policy. A more recent paper[2] looking at this lack of progress, asked,

- What do examples of small-scale successes tell us about large-scale programmes?

- How relevant, trustworthy and credible are the inferences and outcomes of earlier examples?

- How do earlier subsidised examples with provided devices inform future sustainable programmes with users' devices?

- How does funding and policy skew the choosing, siting, sampling, evaluation and reporting of examples?

- What is the impact of project evidence and outputs from earlier examples on corporate and government policy, priorities and resources?

These questions hint at the problem of realising the potential of mobile learning and help to explain the lack of progress. The earlier policy recommendations and documents now clearly promote and endorse the idea of learning with mobiles; so, what are the remaining barriers? What more is needed? What is the policy recommendation that would unlock all the other recommendations?

Evaluating the evidence

The researchers and the activists might feel that real progress and impact will only happen if the mobile learning community can produce the right kind of evidence and arguments, presented in the right way, to convince corporates to invest in creating viable commercial models and to convince governments to change policy priorities and reallocate public funds. The recommendation would be for better evidence and this better evidence must come from evaluation. Evaluation is however always problematic, in terms of its execution and its relevance. It is tempting to assume that evidence and evaluation from the past and evidence and evaluation from elsewhere will be sufficient to inform the here-and-now and will inform priorities and resource allocations, that small-scale fixed-term subsidised projects run by enthusiasts in one context can inform national programmes in a different context, that delegates and readers take away no more than plenary panels and case studies can actually substantiate. However, there are limitations to our accounts and analyses. These limitations are varied, complex, often obvious and usually over-looked or ignored. Our recommendation is thus not for more evidence and more evaluation but for more scrutiny and more scepticism, perhaps a practical level for improving the communication between practitioners, researchers and policy-makers so that they better understand each other's needs, processes, languages and roles.

One of the obvious limitations of our accounts and analyses is the consequence of the rapidity of demographic and social change as people adopt and adapt each new technical development; whilst technical predictions may be linear and rational, social changes are not. In addition, these changes take place with increasing rapidity and with increasing complexity, synergy and interaction, making the lessons from history, even very recent history, of little value as guides to the future. Were it not both time-consuming and expensive, there would be a strong case for a *systematic review* of the scientific literature of mobile learning, a review that would make explicit what had been searched, using which search terms and for how far back in time. Sadly the field is developing too fast for this process to give a valid snapshot and to get a balanced judgement, so expertise and experience will inform future policy and practice.

There are some reservations about the scientific and academic press in which career academics describe and evaluate their own projects and review those of their peers. Even academic research budgets seldom allow for external evaluation, sophisticated data gathering and analysis, the qualitative methods that would help understand motivation as well as behaviour, and for the novelty of being observed using new technologies to wear off.

Much of this research literature of mobile learning comes from English-speaking communities and comes from a handful of *hot spots* and *patron saints*, often and originally South Africa and UK, broadening out to Western Europe, parts of Asia Pacific and latterly to USA; much can be attributed to dedicated individuals rather than universities or companies. The breadth and diversity of our experience is considerably narrower than we think.

Digesting, comprehending and synthesising complex, incomplete and heterogeneous information and accounts from research journals is not easy. Consequently there is always an audience and an appetite for simpler explanations and more generalised findings. Less demanding resources, such as project reports, vendors' white papers and ministry bulletins, come with different problems, those of partiality and more obvious vested interests. In both cases however, endemic challenges for the reader include understanding the siting and sampling of interventions, trusting the confidence and reliability in reported results and distilling causes from anecdotes.

Furthermore, only recently and still infrequently has failure been seen as the mark of persistence and innovation - the FAILfaires organised by MobileActive have been ground-breaking in challenging the prevailing success-driven mind-set. Generally it has been success that has been noticed and emulated and consequently most accounts of mobile learning discuss its successes not its failures. Our capacity to learn from experience is reduced when half of our experiences are invisible.

Seeing the prestige, publicity, resources and momentum invested in some projects at their launch creates a concern that they are *doomed to succeed*.

The team responsible for this publication is very aware how individual perspectives shape individual contributions. The development of mobile learning has been uneven and opportunistic, and activists have responded to local needs and local conditions rather than manifesting any specific bias. This has resulted in an uneven and haphazard spread of expertise and experience. The issues of transferability and relevance are the critical issues here. Every account will be incomplete and lack the full facts on which to make the judgments necessary to decide about transferring ideas, technologies and techniques from one time, place and culture to another. Simplistic assumptions should be avoided and the net should be cast wide when looking at useful work with disadvantaged people and communities from wherever it happens. The current publication contains case studies and gives space to some projects that have not received their share of exposure. Contributors talk about failure as well as success and focus on critical incidents and counter-intuitive outcomes. The point of this is not to weaken the publication by complicating its message but to draw attention to the on-going need for rich, honest and varied accounts and rigorous analysis of data, methods and findings.

Reading recommendations

Life-long learning is growing in importance and as is the potential for mobile technology support and delivery. Earlier articles have documented different aspects of this work and have made recommendations designed to take this forward. This article attempts to draw these earlier recommendations together into over-arching recommendations that are meaningful, robust and realistic but also sustainable and transferable.

The recommendations in this publication, and others, are phrased in terms of 'should' (for example, 'the government should do something'), but why not ask 'why should?' (for example, 'why should the government do something?'). One response would be 'evidence', the response that the evidence supports these and other recommendations. The evidence, once examined critically, might indeed support such recommendations but there is an alternative, comprehensive and more resilient argument. Using mobile technologies to support skills development and lifelong learning is a reflection of the changing and more mobile and connected nature of our societies, communities and businesses. The mobile learning space is only a corner of the wider mobile space; mobile activity represents vast amounts of assets, commodities, resources and transactions at a community, informal and personal level, at an organisational, institutional and corporate level, and at a national and supra-national level. Mobile technologies are sweeping away the wristwatch, the analogue camera, the postcard, the diary, the calculator and the CD. Banking, music, journalism and politics are mobile and because of this they reach more people. Other areas of human activity will follow. The Capability Approach and the lives that people could live that would value must now be seen in the context of a mobile and connected world. The argument for using mobile technology to support skills development and lifelong learning is that this is the best, the most appropriate way to enhance their choices in this mobile and connected world. When the 'why should?' question is asked (for example, 'why should the government do something?'), the answer is not that the evidence is compelling but that the morality is, and this publication unpacks the nature of responsibilities and opportunities in a changing world.

It is a mobile, connected and rapidly changing world. Certainly, livelihoods and business are increasingly mobile, connected and rapidly changing, and for communities, cultures and countries to survive and compete then education must be mobile, connected, flexible and responsive, and it must be life-long. In very general terms, it is the responsibility of governments and ministries to reflect and represent their societies, in terms of national expectations about the use of technology and in terms of the mission to build national capacity. This means economic capacity, by attracting inward investment and by nurturing home-grown entrepreneurs and micro-businesses, by increasing and extending connection with the global information superhighway and knowledge economy, and by extending national educational opportunities. It also means the underlying cultural, social and personal resilience, adaptability and capability, especially as the pace of technical change and social adaptation means that governments and societies must be ready for continuing and increasing change in ways that will be difficult to predict or control.

Many of the team's recommendations show a concern for equity and fairness, that voluntary civil society organisations, rural areas, indigenous peoples, poor and marginalized communities, people with disabilities, do not get overlooked, disempowered or ignored by universal mobile technologies, that the skills development and the lifelong learning not only reach them but recognise and involve them. Alongside these recommendations are others that remind us that mobile technologies will not remove digital divides but will in fact complicate and reconfigure them, and other recommendations that recognise that mobile technologies are often ethically problematic. So whilst the team completely endorses the potential of mobile technologies for enhancing, supporting and delivering skills development and lifelong learning, the team also recommends vigilance and caution.

There are also recommendations from the team that encourage educators, managers and officials to recognise that the mobile technologies are changing the world in fundamental ways, ones that require flexibility and imagination, and the courage to work outside the old norms, procedures and practices. Other recommendations ask us to think about the totality of mobile lifelong learning and mobile skills development, to think of tariffs, bandwidth, pollution, electricity supply, participative design and sustainability alongside technology and pedagogy.

Given that resources are always finite, the obvious priorities for national policy makers, institutional programme managers and the donor community should be:

- local language / indigenous culture / nomadic peoples;

- women and girls, especially mothers;

- rural learners / agricultural workers;

- unemployed youth;

- refugees and displaced persons;

- the older or disabled learner;

- the micro business person, the start-up entrepreneur;

- the social enterprise activist.

These are not only groups with most need but also are generally groups with the biggest potential for impact and improvement, both socially and economically.

Perhaps the final recommendation to corporates, agencies, institutions and ministries is that they look out of the window, look into the street and think about their roles and responsibilities in the changing world.

Top priority recommendations

Vision and policy

Policies for adoption of mobile learning should be underpinned by a vision shared between stakeholders (government, employers, learners, communities, network providers, education and training advisors, NGOs) of the ways in which mobile technology can widen access to learning, deepen and enrich learning experiences and place more control in the hands of learners.

Policies for implementation of mobile learning should take account of all key stakeholders, such as community representatives, government, network providers, formal and non-formal education and training providers.

Policies for implementation of mobile learning should identify bold but achievable targets for educational attainment and for inclusion of groups with least access to education and training. Special account should be taken of the power of mobile learning to widen access to learning for women, ethnic minorities, migrants, refugees, rural communities and people with disabilities.

Strategy for implementation and evaluation

A mobile learning policy should be backed up with an implementation strategy that includes measures of return on investment in financial terms but equally recognises social and health benefits.

Strategies for implementation should include robust evaluation processes to inform future plans.

These should enable the reporting of failure as well as success, and the understanding of culture.

Strategies for implementation should take account of resource implications such as connectivity costs, bandwidth limitations, technical support and ensure safe access to electric current in 'off-grid ' areas.

Strategies should deploy technical solutions to ensure privacy of personal data and to protect vulnerable learners from inappropriate content and intrusion, but also incorporate online safety into training programmes.

Role of network operators

Network providers (MNOs) should adopt a shared values approach and seek to balance business benefit with their corporate social responsibility and develop pricing policies and network

infrastructure that will widen and deepen access to learning.

Role of training and education providers

Training should be provided for educators in the formal and non-formal sectors. This should include selection and creation of content that reflects local contexts, workforce needs and uses local languages where appropriate.

Educators and trainers should consider employing the full range of applications of mobile learning including participative design, learner collaboration and user-generated content.

Environment

As mobile devices contain toxic materials, planning should include collection and safe disposal when devices become redundant.

Endnotes

1   Traxler, J., and Kukulska-Hulme, A. (2005). *Mobile Learning in Developing Countries* (G. Chin, Series Ed.). Vancouver, BC: Commonwealth of Learning.

2   Traxler, J. (2013). *mlearning* Solutions for International Development- Rethinking the Thinking. *Digital Culture and Education*, 5(2), pp. 74-85.