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mLEARNING SOLUTIONS FOR INTERNATIONAL DEVELOPMENT - RETHINKING THE THINKING

John Traxler

Abstract

There are now many accounts of mLearning projects and pilots, and perhaps solutions, for International Development. This paper does not add to these but questions the ways in which researchers and policymakers talk, think and reason about them. The issues being addressed here are not research issues but are the relationships, in the field of learning for international development, of these accounts to the wider contexts in which this research takes place. Rather than assuming that evidence, sampling, evaluation and hypotheses, for example, are of internal, academic or methodological interest, this paper tries to explore their wider context, itself not methodologically straightforward. These are however important issues because learning with mobiles in international development has started to move from practitioners, activists and researchers to agencies, corporations and policymakers. This is a transformation methodologically, ethically, culturally and pedagogically as new drivers, constraints and goals come into play.

Keywords: Digital literacy, technology, practice, teaching, Mexico, secondary school, socio cultural theory.

Part one: The time is right

Agency Interest

It is important to explore the place of mobiles to support and deliver learning in international development now because there has been increasing interest amongst the wider world of agencies, corporates and ministries, alongside a discernible shift in activity away from Western Europe. This introduces new pressures and drivers into a research community that had previously evolved in a relatively stable and conventional research ecosystem.

Prior to this, it might be plausible to characterise much of the mobile learning research community as relatively small, an appendage of the e-learning research community, working within the same paradigm and attempting to deliver on the same objectives. This community had established that it could enhance, enrich and challenge existing ideas about education but only on a small scale and within resource rich environments (Kinshuk, Huang & Spector, 2013; Berge & Muilenburg, 2013; Parsons, 2011). A smaller community, mostly outside Western Europe, used mobiles to extend access to education in the face of the challenges of infrastructure, resources, distance and environment – something of simplification (Traxler 2013) but nevertheless a useful caricature of the *status quo ante*.

To trace a time line of the change that took place, in about October 2010, the Development Fund of the GSMA, now subsumed into the GSMA Mobiles for Development programme, the trade association for the MNOs (mobile network operators) globally, published *mLearning: A Platform for Educational Opportunities at the Base of the Pyramid* (GSMA 2010) intended to brief the MNOs about possible business

opportunities. In February 2011, the massive *World Mobile Congress* in Barcelona sponsored its first awards - now in their third year - for learning and attracted an impressive field from organisations working in international development. In August 2011, USAID, United States Agency for International Development, convened the first *m4Ed4Dev* symposium in Washington D.C. as a prelude to launching the *mEducation Alliance* in early 2012. In November 2011, one of the WISE debates focused on *mobiles, education and the hard-to-reach*. WISE is the World Innovation Summit for Education, an annual educational convention funded by the Qatar Foundation. In December 2011, UNESCO, the United Nations Educational, Scientific and Cultural Organisation, in Paris convened its *First Mobile Learning Week*, consisting of both closed sessions and open sessions. These sessions focussed, regionally and globally, on policy issues and teacher development, the latter often seen as a crucial place to break into the educational cycle and promote *education for all* (EFA). In March of 2012 there was a further *International Symposium* in Washington organised by UNESCO, hosted by CoSN, the Consortium for School Networking, and drawing together major practitioners and stakeholders.

At about this time, a UNESCO initiative funded by Nokia, commissioned regional reviews that would capture the global state of mobile learning. This was not specifically in relation to international development and indeed had to take whatever evidence it could find. The objective was however to support UNESCO priorities which continue to include Africa and the empowerment of women and girls. The reviews had pretensions to being rigorous, systematic and comprehensive but were largely produced by consultants from secondary sources and informal contacts.

The next *mEducation Alliance Symposium*, in September 2012, entitled *Partnering For Scale And Impact*, illustrated the growing emphasis and direction of both corporate and agency priorities. The second UNESCO event, another *Symposium*, included in its *Mobile Learning Week*, in Paris in February of 2013, continued to align with wider objectives within the development community, shared with USAID, and focused on three particular EFA goals as they 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.

How each of these goals was seen as related to their respective mobile objective reveals something of the bias behind agency thinking.

Significantly, the *Symposium* sought contributions on *Mobiles for Literacy*, *Mobiles for Quality of Education* and *Mobiles for Gender Equality*. The UNESCO initiative, supported by Nokia, now had several components, namely, Policy Research and Advocacy, Teacher Support and Development and Mobile Learning Technology Concept Development and has started to convene panels and publish on all these three components. Workshops on *Developing Literacy through Mobile Phones - Empowering Women and Girls* were another UNESCO activity.

There have also significant reports to the World Bank, *eTransform Africa Final Report* (World Bank 2011a), and to the World Economic Forum, *Accelerating the Adoption of mLearning: A Call for Collective and Collaborative Action* (WEF 2012) along with second one from GSMA (2012), their *Transforming learning through mEducation* produced by McKinsey

& Company, in Mumbai, and the *eLearning Africa 2013 Report* (Isaacs 2013), show mobiles surfacing as the obvious delivery mechanism across the continent. The emergent UNESCO Policy Guidelines understandably reflect the world in which UNESCO operates. They perhaps unsurprisingly were aligned to UNESCO's member-state audiences of ministry policy-makers and presented mobile learning as a conception that could work best within the confines of national formal initial education systems with much uncritical talk of *system strengthening*. Subsequent publications addressed literacy for women and girls (UNESCO 2013), youth workforce development (USAID 2013a) and reading (USAID 2013b).

Increasingly learning with mobiles will be influenced by these organisations and agencies, by their conceptions and their priorities. UNESCO for example say, "Mobile learning, or "m-learning", offers modern ways to support learning process through mobile devices, such as handheld and tablet computers, MP3 players, smartphones and mobile phones." whilst the USAID position is, "the identification and applications of mobile technologies that can be effectively leveraged to address pressing educational issues including: literacy, appropriate educational content development and dissemination, system strengthening (such as education data for decision making), accessibility for learners with disabilities, professional development for educators, and workforce development.", from the mEducation Alliance mission statement (<http://www.meducationalliance.org/page/mission>). These definitions are at odds with the current ideas of the mobile learning research communities that have moved away from techno-centric definitions towards conceptions of mobile learning that focus on the mobility of the learner, on the capacity of learners to cross contexts, and on conceptions of learning aligned to mobile societies (Traxler 2008a).

There is however a further tension within the agencies' positions. In their policy and publications, they maintain the un-resolved tension between the conception of mobiles as the instruments of reform and improvement, as technologies for ministries, educators, schools and colleges to enhance the management, content and delivery of their (existing) curriculum, and the conception of mobiles as the instruments of dramatic social, economic and political change, of some educational Arab Springs that sweeps away those same ministries, institutions and officials of education rather than reforming and improving them. To put it another way, there is a notion in many parts of the world that the (formal) education system is *broken*, that this is part of a *crisis*, which I refer to later, and no longer aligned to or adequate for the various different societies that we live in. The ubiquity of mobiles and how they change our relationships to learning, knowing and understanding; to community, relationships and identity; to ethics, norms and expectations; to employment, economies and economics; to creativity and expression is only part of that (Traxler 2010a). This contrasts with a notion that learning with mobiles is essentially just the latest opportunity for institutional or corporate e-learning and can thus be co-opted into existing educational systems. These arguments are characteristic of a technology that inhabits the *bottom-of-the-pyramid* and the *development* context in ways that would never be true of other ICTs such as TVs and PCs.

American and Corporate Interest

Meanwhile, the past two or three years have seen much greater interest and activity around learning with mobiles in North America, especially in the USA, and this is gradually shifting the intellectual and commercial centre of gravity away from its roots in Western Europe, particularly the UK, and in South Africa. It is also changing the nature of what is understood to be the most effective pedagogies for mobiles. Historically, the Western European interest (Kukulaska-Hulme *et al* 2011) has been on informal and contextual learning underpinned by a substantial engagement with theory, for example

Actor Network Theory (Bell 2010), Conversational Theory (Laurillard, 2002, 2007), Activity Theory (Uden 2007, Wali *et al* 2008) or socio-technical systems ideas generally, inherited often from the earlier theorising of e-learning. Sadly, these have never engaged very convincingly with theories of international development, for example, the Capability Approach (Kleine 2009). These foundations of mobile learning have been encapsulated in the *mLearn*, IADIS and WMUTE conference series, the *International Association for Mobile Learning* and the *International Journal of Mobile and Blended Learning*. *mLearn* started in 2002, the others shortly after. Now, corporate training, the connected classroom, *edutainment* and drill-and-test packages are an increasing part of the picture; they too represent changes in the conception of mobile learning. These changes had been predicted and accelerated by successive recent Horizon Reports (<http://www.nmc.org/horizon-project/horizon-reports>) and are illustrated by looking at the contributions to the annual *mLearnCon* conference, started in 2010, and by the growth of *SIGML: Mobile Learning Special Interest Group*, started about the same time within *ISTE* (the International Society for Technology in Education, the premier US membership association for educators and education leaders working in e-learning). As well as their educational significance, they point to growing confidence in viable business models for at least some aspects of learning with mobiles. One particular spin, echoing earlier discussion in the UK and in Africa but not reflected in the research literature, is the notion of *bring-your-own-device* as a strategy combining choice with sustainability, though not without problems in terms of infrastructure, equity and quality (UNESCO 2011; CoSN 2011, Traxler 2010b). Incidentally, this approach also represents the only viable general strategy for most of the global South. My session at eLearning Africa in Dakar in 2009 (http://www.elearning-africa.com/conference_past.php) was entitled, ‘African Learners – Institutions and Organisations Should Leave Them to Their Own Devices?’

Another consequence of the growing US involvement in learning with mobiles and the rise of the so-called *apps economy* (Genachowski, 2010) is that learning with mobiles no longer needs research or researchers to work with practitioners and policy makers. “Education? - there’s an app for it”, people now say, everyone understands it. Culture and pedagogy no longer seem to be components of learning with mobiles as commerce and common-sense take their place. In the wider practitioner and policy communities of the developed world, everyone owns and understands a powerful mobile and its affordances, for learning and anything else, are clearly just *common-sense*, no longer requiring specialist research input. Everyone, including those outside formal education organisations, has a theory of education and a theory of learning with mobiles, perhaps several, perhaps not ones that are proven or particularly complex or rational, perhaps only something like *content is king* and so the role for the research community is increasingly marginal. This is an important issue because as we use mobiles to take learning to communities and cultures unlike any of our own, we will encounter their local theories of learning, theories embedded in their traditions and their culture. These express their ideas about what to learn, where, when, why and how to learn, who learn from; the nature of their educational heritage and identity. The more diverse our global ecology of learning and its theories the richer the opportunities we offer to other cultures and communities and the more responsively we can engage.

There is however a considerable concern that whilst these new players are attracted to supporting learning with mobiles, that their priorities and values differ from those of the older players and that understandably scale, sustainability and impact now feature much more obviously. In this new ecology of learning with mobiles, these factors mean that some forms of mobile learning will now thrive whilst others will perish. This account may hint at which ones these are likely to be.

Two rather different developments have been firstly MobiMOOC, a MOOC, a ‘massive online open course’ devoted to mobile learning, run for the second time in September 2012 and attracting in excess of 600 participants each iteration (de Waard *et al* 2012) using a robust and flexible mixture of open source and free technologies, and the drafting of mobile learning curriculum framework intended to facilitate the adoption within teacher training institutions (Botha *et al* 2012), now informing the development of a handful of masters courses.

The impact of impact

That scale, sustainability and impact feature strongly in the new agenda means that agencies and corporations are hoping to learn something about from the previous ten years of activity and experimentation that will inform their activities for the next ten years. This perhaps overstates the changed environment; the past is not yet over and the future began some while ago and the present is a phase of blurred transition. Nevertheless, the agencies and corporations are looking for something to build on.

Many of the ways in which we think about examples from the history of mobile learning, and many other kinds of small-scale educational and social interventions, are, however, deeply problematic and risk leading to false conclusions. There is, for example, a simplistic filter that says some interventions took place in developing countries and are relevant, others took place in developed countries and are not, sometimes excused or explained by a *trickle-down* model of diffusion. This risks overlooking the experiences and evidence using mobiles to address other aspects of educational disadvantage, disenfranchisement and exclusion in the developed world over ten or more years and privileges a specific perspective, a characteristically modernist form of analysis that I return to later.

There are a variety of issues related to the developed world, for example, disadvantage, disenfranchisement and exclusion; technology and education; mobile learning; they are all subject to specific discourses and disciplines, to specific arguments and analyses that seem different from those used in the developing worlds. Can these be broadened and connected? Can we look at learning with mobiles through the same intellectual lenses and with the same methods, theories and values irrespective of location or context, not letting conceptions about *developed* vs *developing* prejudice how we think and act, or the dichotomy of *mature* and *emergent* economies or *East* and *West*. We return later briefly to this as symptomatic of a modernist world-view. There are however also more systemic technical problems.

Funding and Reporting

In reviewing the recent UNESCO outputs and other global secondary sources, several things are apparent. The reported activities of the mobile learning community do not often include examples from the commercial and corporate world, from corporate social responsibility projects or agency-funded programmes, certainly seldom in the peer-reviewed research literature; they do not often include examples from the work of consultants, for whom publication was not a priority, an expectation, a duty or a right. The reported accounts do not include anything Russian, Arabic or Chinese, nor much in French or Spanish or Portuguese; they do not include literature from Central Asia or Latin America. North American contributions were infrequent until recently. Any conference proceedings, research journals or press coverage would probably confirm the impression that accounts of failures are massively out-numbered by accounts of successes. (The prevalence of papers analysing critical success factors (for example, Cochrane 2010) and the absence of any that analyse critical failure factors bear this out.)

Furthermore, accounts of learning with mobiles are easy to find but only if they defined themselves as *mobile learning*. In looking at this multiply skewed body of evidence, examples and experiences, managers and policymakers can necessarily only arrive at skewed understandings.

Readers should look at how these various reported examples came to be funded in the first place. They could only happen if, and for as long as, they were funded. This funding support generally came from departments, donors and agencies with a development or capacity building or humanitarian agenda. Rightly or wrongly, these departments, donors and agencies provided funding opportunities for mobile learning researchers to demonstrate that their work could make a development impact, broadly defined or narrowly defined. In any review of the capacity of mobile devices to address social or educational disadvantage, we cannot ignore the extent to which the visions, values, performance indicators and preferences of the funding departments, donors and agencies have skewed the outcomes and impact of the work so far and the lessons we learn. There is therefore the likelihood that funding perpetuates funding, that the process is self-referential and circular, that what we are likely to see is what has been cynically characterised as a version of *policy-based evidence formulation*. However, *evidence-based policy formulation* is, in the words of Ian Gibson's MP Chair of the Committee Science And Technology Committee remark (Hansard, 2004) in the UK Parliament increasingly derided as *policy-based evidence formulation*, and some in the social research community (Sanderson, 2004) have asked, "Has evidence-based policy any evidence base?"

Evidence and Evaluation

A major component in the cycle of policy and research is evidence and this comes from evaluation activities, sometimes called M&E, monitoring and evaluation. Evaluation of education, and certainly of mobile learning, should however be recognised as notoriously difficult to evaluate. It is possible to measure changes in attributes or behaviour but this does not mean these are educationally meaningful or remotely life-changing. In the case of learning with mobiles, learning as part of moving around the real world, it is difficult to observe, difficult to measure and difficult to explain meaningful educational change (in terms of the myriad causes and effects in people's real world lives), much more so than any sedentary e-learning or class-room learning. In general, evaluation has proven to be imperfect (Traxler & Kukulska-Hulme 2006). In practical terms, working with leading edge mobile technology has meant that technical problems push evaluation off the end of the schedule or off the end of the budget. Mobile technology and its appropriation by users grow so rapidly and so unpredictably that a structured, thorough and comprehensive evaluation might provide a rigorous account of an environment that now no longer exists. There are difficulties deploying adequate and appropriate expertise within the confines of individual short-term technically innovative projects or within the confines of theory-driven research projects. The resources and time scales are inadequate. There are difficulties framing individual research projects with sufficient coherence in terms of ethos, methods and planning to make this possible. These are situated however, at the centre of wider contextual concerns. As I have said, the ways that projects are funded, organised and reported are all problematic but actually our biggest challenges are not rigour and trustworthiness within individual projects but the inference, abstraction and reasoning above, outside and across projects, that happens in order that policy makers can obtain some big picture.

Generalising and Transferring

Generalising and transferring are complex. We, in parts of the mobile learning community, try, for example, to engage with policy makers with briefings and case studies that build on individual research project evidence and conclusions. When in earlier work, we looked back at these, several things are apparent (Traxler & Wishart 2011, Traxler & Belshaw, 2011). Firstly, that they often round up predictable experts from within the community, people known to be good (English) speakers or writers describing successful projects in an accessible fashion with good graphics. Secondly, failure often goes unreported, unpublished, and unacknowledged (except at the small, but fortunately growing, number of events round the world, some called FAILfares that celebrate failure as a mark of innovation and confidence), and the impression is that careers and reputations are not built on failures however interesting or thought provoking (World Bank 2011b). Katrin Verclas of MobileActive says, "We have to report to donors and donors do not like to look bad, and so we don't like to look bad as nonprofits. And so we have a tendency to highlight our successes and never talk about our failures." (Voice of America, 2010). Thirdly, many projects are destined to be successful and are reported accordingly. Funders, agencies, ministries, officials, researchers and others will have all invested much prestige and resource giving projects the necessary momentum and visibility, and failure becomes unthinkable and inconceivable. The staff at high-profile successes can become unwittingly very well rehearsed and media-savvy in their accounts and explanations of success, and pre-occupied with fund-raising, losing sight of the practicalities and day-to-day issues. Furthermore, mobile learning is plagued by unflattering comparisons with apparent successes in cognate fields, for example the *hole-in-the-wall*, *eBay*, *mPESA* or the *Grameen Bank*. Can we expect safe inferences and understanding to grow out of these examples?

Analysis within projects can be skewed too by the history and assumptions brought to them. If you are a technologist or a teacher, everything, the problems and the solutions, looks like technology or teaching. This mind-set not only constrains the downstream as we analyse data and present evidence, but also the upstream as we isolate and eliminate confounding variables and site our interventions across the remaining problem-space to generate the appearance of generality and transferability.

These issues interact with the life cycle of projects from funding onwards. Funders, that is donors, agencies and ministries, make choices about the spread of projects, projects then may themselves make choices about siting of their interventions; later both projects and funders will make choices about how they sample and report their respective activities. They are all caught in a pay-off between depth and breadth. On the one hand, they can focus on one aspect, one dimension and seek data and outcomes that are as rigorous and trustworthy as possible but may lack wider relevance. On the other hand, they could try sites and samples spread across a range of dimensions or variables, spreading themselves thin in terms of the trustworthiness of their data and outcomes but hoping for wider relevance and greater generality.

These are some of the reasons why it is now timely to question the ways in which those of us working with mobiles for learning think about earlier examples of learning with mobiles in *development*

To summarise, so far, we could ask:

- 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?

The underlying challenges

As I have said, there are major flaws in how we report and reason about the experiences, the outcomes, the relationships and the environment around our work learning with mobiles in international development. This happens at a number of levels for a number of reasons. It can be explained within what might be called a *common-sense* view of the world and remedied by technical and tactical fixes, by greater transparency, by greater resources and by greater rigour. Some of these flaws are explained as the workings of *multi-causality* or excused as *unexpected consequences* or what might be called *unexpected causes* - by which I mean, for example, the bias and distortion introduced into fieldwork and monitoring by senior officials reluctant to leave the capital, by junior officials maximising their *per diems* and by consultants maximising their *air-miles*?

A more comprehensive account would put these into a broader intellectual framework, the transition from *modernism* to something else. *Modernism* is the rational and objective worldview, embedded in the people, history and culture of Western Europe. It subsequently fragmented within academic philosophical circles and has then been problematised by various authors characterised as *postmodern*. It is however still the prevalent ideology in countries and institutions around the world that have been influenced by European ideas. Post-modernism's positions are complex and confused but one of them, for example, characterises our societies as moving into *liquid modernity* (Bauman, 2000) – apocryphally paraphrased as *permanent beta* – and not just the developed and Western societies of the global North.

Modernism might be characterised as the faith that history and humanity are going somewhere, somewhere good; that language and other symbols can describe reality (and that reality as an objective, shared, consistent and unambiguous source of all our experiences actually exists); that cause and effect are simple and stable and also that right and wrong are equally simple and stable; and that reason, science, technology and education are agents of benign change and improvement.

These are modernism's foundational *grand narratives* (Lyotard 1999). Other derivative ones might include Darwinian evolution, Marxist accounts of history, Freudian psychoanalysis, the *scientific method* as a mechanism for establishing truth and the ideal of the *nation-state* and its bureaucracies. I argue that *International development* is one of modernism's lesser grand (*sic*) narratives. It is a tacit and simplified article of faith, one that justifies European interventions and attitudes in other cultures, especially Africa, from the seventeenth century onwards, and in an attenuated globalised form, this faith accounts for all those universities in the global South aspiring to recognition by the global North and privileging Western styles of knowledge and learning as the only credible forms. Post-modernism can only rigorously be defined as whatever comes after modernity. Mobility, specifically the mobility and connectedness afforded by mobile technology, changes or challenges so many aspects of different cultures, particularly the solidity of our knowledge, identities, cultures and institutions, as to take us beyond the certainties of modernism (Traxler 2008b). We should retrace our steps and ask if the issues we have outlined earlier are the various consequences of misplaced modernist expectations, the expectations that history can teach us something, that examples are examples of something.

As I implied earlier, it is probably a modernist fallacy to think that evidence is a credible and rational basis for policy formulation; it is an act of faith since clearly there can be no evidence for evidence. Thinking there was would be circular.

There is a related issue. The world is now increasingly characterised by challenges, disturbances and discontinuities that threaten the dominant and crudely modernist, notions of stability, progress and growth. These are major challenges to research communities, including the development studies research community and the mobile learning research community, challenges to these communities to stay relevant, responsive, rigorous and useful.

In various public forums outside and across the research communities, there is the notion there is an emergent global *crisis*, a notion developed at a recent Alpine Rendezvous workshop, *TEL: the Crisis and the Response* and a debate at [ALT-C](#). These are also documented and discussed in:

<http://ignatiawebs.blogspot.co.uk/2013/09/preparing-for-debate-alt-c-online.html>;
and
http://www.anglia.ac.uk/ruskin/en/home/faculties/fhsce/news-events/news/Leading_on_the_Technology_Enhanced_Learning_debate.html

This is manifest as economic and resource crises, including long-term radical increases in economic inequality within nations; youth unemployment across Europe; sovereign debt defaults and banking failures; as environmental and demographic crises, in particular, as eroded refugee rights and military occupations; nation-state population growth and its implications for agriculture, infrastructure and transport; as crises of accountability, expressed in the failure of traditional representative democracy systems especially in the context of global markets; the growth of computerised share-dealing; the emergence of new private sector actors in public services; the growth of mass participatory movements, the rise of unelected extremist minorities challenging the legitimacy of the nation-state and its institutions; as crises of socio-technical disruptions and instability, amplified by a reliance on non-human intelligence and large-scale systems of systems in finance, logistics and healthcare, the development of a data-rich culture; the increasing concentration and centralisation of internet discourse in the walled gardens of social networks; the proliferation of complex digital divides; of the dehumanisation crisis, expressed in the replacement of human flourishing with consumption; the replacement of the idea of the person with the idea of the system, the replacement of human contact with mediated exchange; the commodification of the person, education and the arts. The notion of crisis is manifest specifically in the current context in learning with technology, in for example the dependency of educational institutions on computers for research, teaching, study and knowledge transfer; the use of computers to industrialise education; the globalisation and corporatisation of learning threatening marginal communities; learning driven by skills and employability in an increasingly turbulent future and the extent to which the mobile learning research communities question, support, stimulate, challenge and provoke their host education sectors.

Learning with mobiles in *international development* is at the intersection of technology and learning and it, as we said earlier in describing modernism, encapsulates many of the ideals, problems and potential of both. It is possible however that they could ameliorate some of their consequences or amplify and exaggerate others. There is however a possibility that in exploring the examples of the past and seeking some sort of narrow academic rigour, relevance and transferability, that we are merely *rearranging the deck chairs*

on the *Titanic* or *fiddling while Rome burns*, that these are no longer relevant or adequate for the following reasons.

Learning with mobiles is based in communities nurtured within the institutions and organisations of formal education in the recent decades of relative stability and prosperity in the developed nations of Asia-Pacific, North America and Western Europe; learning with mobiles in *development* contexts has inherited much of these sensibilities and aspirations. There are no longer safe or reliable.

Conclusion

This paper has attempted to reconceptualise the role of mobile learning in international development, firstly by exploring its changed role in moving from a small-scale educational largely European activity operating within a conventional research environment to a more global, corporate and American activity reinterpreting or misreading its earlier achievements and methods, and secondly by placing this transition alongside other global transitions that leave behind the settled understandings of the world. This is a problematic undertaking intended merely to encourage greater scrutiny and perhaps scepticism of our work with mLearning in international development.

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Biographical statement

John Traxler is Professor of Mobile Learning, the world’s first and a full UK professor since September 2009 and Director of the Learning Lab at the University of Wolverhampton. He is a Founding Director and current Vice-President of the International Association for Mobile Learning, Executive Committee Member of the USAID mEducation Alliance, Associate Editor of the International Journal of Mobile and Blended Learning and of Interactive Learning Environments. He is on the Research Board of the Association of Learning Technology, the Editorial Board of Research in Learning Technology and IT in International Development.

John has co-written a guide to mobile learning in developing countries for the Commonwealth of Learning and is co-editor of the definitive book, *Mobile Learning: A Handbook for Educators and Trainers*, with Professor Agnes Kukulska-Hulme. They are now working a second book, *Mobile Learning: the Next Generation*, due to be published in 2014. He is co-authoring a book, *Key Issues in Mobile Learning: Research and Practice*, with Professors Norbert Pachler and John Cook, and *Mobilizing Mathematics: Case Studies of Mobile Learning being used in Mathematics Education* with Dr Helen Crompton.

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