

FALLING UPWARDS: THE NEED FOR NEW STRATEGIES IN BRIDGING AN EXPANDING GAP

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1. INTRODUCTION

The digital divide has become the neighbourhood dragon. Everybody knows it is there, but it has become such a familiar sight, an integral part of the local tourist scenery that we accept it even as we recognize its danger. And yet the dragon grows bigger and more dangerous by the day. The challenges in trying to destroy it by conventional means are immense, and all we are achieving is limited containment, not destruction. We must think of new strategies, new approaches.

I always quote a senior colleague who some years back said to me: “*Aeroplanes do not fly because of gravity*”. This statement captures the ethos of what we must do with the digital divide. We must accept that the pre-conditions that have led to the knowledge society in the developed countries will take very long to achieve in our countries. If we wait for the pre-conditions, the dragon will simply grow bigger until we can no longer fight it. We therefore need to develop new strategies. The current approach is:

“How can we rapidly put in place the pre-conditions necessary for our countries to join the knowledge society?”

The approach suggested is:

“Given that we cannot rapidly put in place the accepted pre-conditions for joining the knowledge society, what strategy must we use to ensure that our countries join the knowledge society regardless?”

The blind can read; aeroplanes fly despite gravity; and ships sail against the wind. In bridging the digital divide, we need ingenuity in the face of overwhelming odds. We must go against all conventional wisdom that currently makes up the “*laws*” of ICT. The gravity created by the challenges we face must not make us fall down: ***we must instead fall upwards***. In this context, falling upwards means succeeding against all conventional wisdom.

The main motivation for this paper? Developing a new conceptual framework in which the human mind is unshackled from convention to explore novel approaches to overcoming old challenges.

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<http://www.makerere.ac.ug/dicts/team/tusubira.htm>

2. THE CHALLENGES, AND THE FAILURE OF CURRENT STRATEGY

The factors that prevent our countries from joining the knowledge society are well known and have been articulated many times. These include:

- 2.1 Lack of awareness about the opportunities and potential of ICT as a platform or enabler for societal transformation and human development. This is probably the greatest challenge we face in our countries: the-five generation challenge.
- 2.2 Lack of appreciation of the hazards of being left out (or living at the fringes) of the knowledge society.
- 2.3 Lack of skills to use, manage, maintain, exploit and generate ICT resources and opportunities
- 2.4 Very low rates of basic literacy and numeracy. The belief here is that a minimum of literacy and sometimes numeracy is needed for access to information resources.
- 2.5 Very limited penetration, and in many cases total absence, of ICT infrastructure.
- 2.6 Limited bandwidth for linking into the global highway.
- 2.7 Lack of enabling environments

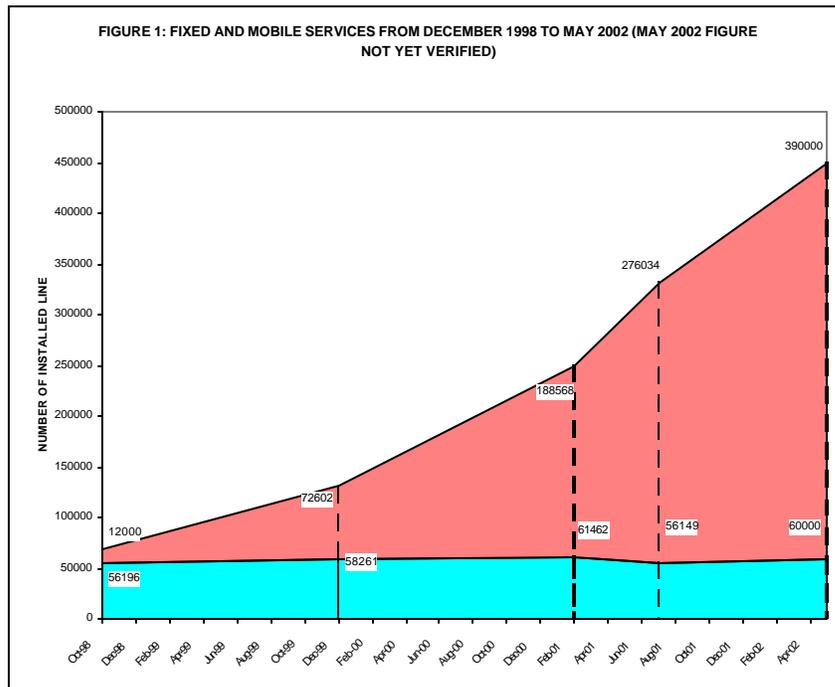
The challenges appear formidable, but they also create immense opportunities. Various solutions have been proposed to address the challenges because, in each case, the counter statement apparently points to the solution: If limited penetration of infrastructure is the challenge, then we must ensure rapid infrastructure expansion.

Fortunately, and unfortunately, access to knowledge creates synergy. Greater access leads to more rapid advancement (and if properly managed greater human development) for those with access. The unfortunate part of it is that those who are ahead consequently advance faster, so that those who are behind are left further back. The gap is therefore expanding, not reducing as many of us like to think.

(This is not to understate the benefits achieved from the conventional approach: using counter statements has led to considerable advancement in marginalized countries, *but it has not reduced the effective gap that, as argued, will continue expanding.* The graph in Figure 1 shows the kind of success that can be achieved in say infrastructure provision. It illustrates the growth of telephone lines in Uganda. Note that against all conventional wisdom at the start of the reform period, the overwhelming majority of lines are mobile. Another example is Makerere University which, in the comparatively short period of two years has achieved a significant level of transformation using ICT; not simply infrastructure transformation, but transformation of the way people think and work. See <http://www.makerere.ac.ug/makict>)

We must create a measure of equity if our efforts to contribute to the ultimate goals of human development as well as world understanding and peace are to succeed. It is a human characteristic that dissatisfaction is not related to absolute levels, but relative levels. This is what drives the need to address the divide and to establish an acceptable state of equity.

By rethinking strategy, those of us in the developing countries, working with development partners like IDRC, have the potential to establish successful methodologies. Emphasis here is on “those of us in the developing countries”. *Success will not be achieved through simple external prescription but through home grown solutions assisted by the international experience and participation of our development partners.*



3. HOW TO FALL UPWARDS

To illustrate this, let us create some scenarios, based on two of the challenges and their possible trends over time. A possible structure is illustrated in Figure 2. In quadrant A, we have a scenario where literacy is low, but ICT penetration is high. In quadrant B, both ICT penetration and literacy are high. In quadrant C, there is high literacy rate, but low penetration of ICTs, while in quadrant D, both literacy and penetration are low.

Strategies to-date have focused on how we can move all countries to the most favourable scenario (quadrant B), a scenario that, for these two challenges, favours integration into the knowledge society. Consider a country with scenario D. Conventional strategy will focus on increasing ICT penetration, or literacy, or both. How fast this can be done; whether to move to the right and then upwards; or upwards and then to the right; or diagonally, will depend on available resources and will be generally very slow. It is a slow climb upwards, too slow to bear useful results before it is too late.

This is where we need to re-examine our strategy. Is it not possible to visualize the knowledge society as a second plane above this scenario plane? Conventional wisdom

states that to get to this plane, one has a staircase only within scenario B, and hence the need for everyone to move there before they can join the knowledge society. Is it not possible to create access to the knowledge society plane regardless of location on the scenario plane?

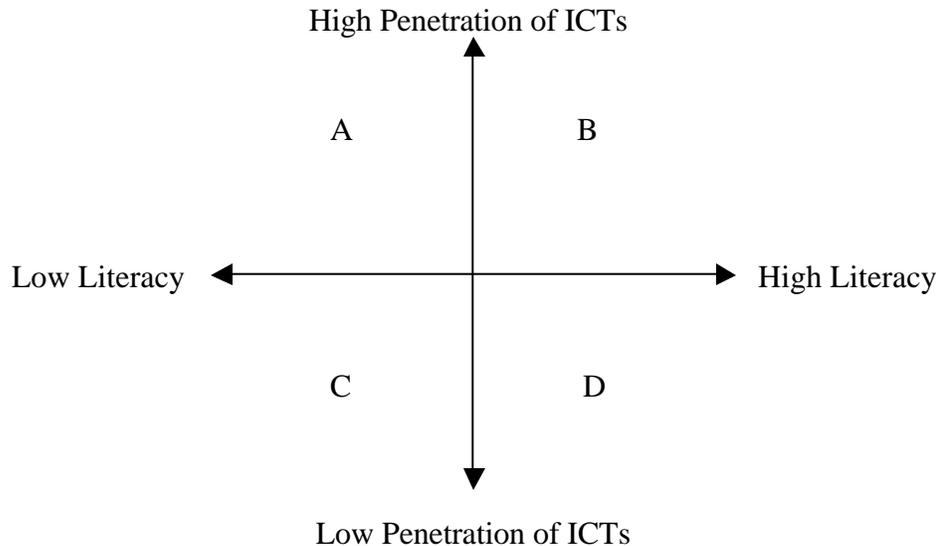


Figure 2: Scenarios generated by two challenges

We must learn to fall upwards. We must change our paradigm and say:

“How do we ensure that country X joins the knowledge society DESPITE lacking some or all of the generally accepted preconditions?”

Falling upwards calls for a lot of ingenuity. It requires the ability to break from the accepted mould and work within new paradigms. This is not to say that we totally abandon the conventional approaches. We however need to turbo-charge them by falling upwards so that the gap starts really reducing. How often do we pause and reflect on the incredible ingenuity of making the blind read with their fingers?

4. CONDENSING THE CHALLENGES

The challenges are many, but in my view, they can be condensed to the following three broad categories (this condensing is aimed at limiting the scenario plane to three dimensions – much easier to visualize without too much mathematical abstraction!):

- Challenges that can be addressed through some form of training: formal, semi-formal and informal: (2.1 to 2.4)
- Infrastructure related issues (2.5 and 2.6)
- Environment issues (governance, fiscal policies, laws and regulation, etc) (2.7)

Our three dimensional scenario will now have 8 sectors composed of the following:

- Awareness and Training: High or Low
- Infrastructure Penetration: High or Low
- Environment: Favourable or unfavourable

Note that cost is not mentioned: it is an underlying challenge in all cases, but it is not THE problem.

Any developing country will fall in one of the eight quadrants obtained by picking any combination of the states of these three challenges. All that is required is an objective evaluation of any country in terms of agreed benchmarks.

Caution:

In benchmarking, it would be *wise* to avoid the benchmarks so beloved in the western world and develop others that are more appropriate to the developing countries. As a simple illustration: the acceptance of communal obligations in most African countries is so high that simple teledensity does not give a realistic measure of the number of people with access to a phone. Many of the e-readiness indicators also need to be similarly carefully re-evaluated.

5. USING SCENARIOS TO DETERMINE STRATEGY FOR FALLING UPWARDS

Is it really possible to fall upwards? Consider the conventional premise that a society that is not literate is uneducated. Set this against some of the fine African oral traditions and training that was aimed at survival and social etiquette suited to their environment. Clearly the conclusion needs re-examination.

For the scenario plane in Figure 2, let us formulate some possible strategies for falling upwards.

Quadrant A:

There is high penetration of ICTs but low levels of literacy, leading to the accepted position that the majority of the people would not be able to join the knowledge society. The conventional approach would involve a major undertaking to increase the level of literacy to a sufficient level – probably a ten-year undertaking before results are visible. Where would the rest of the world be by then?

A better strategy would be to turbo-charge the creation of literacy (long-term) with researching into and implementing methods of technology mediation that would enable an illiterate population to exploit information (short-term). There is a fine point here: The problem is not really illiteracy, but failure to speak a “foreign” language. It is the

medium that has short-comings, not the ability of the destination to understand and use information. There are some ongoing efforts in this direction.

Quadrant C:

There is a high literacy rate but low penetration of ICTs. The ideal would be universal service (the model in developed countries) which is clearly too expensive for our countries. The telecommunications community in Africa has already cracked this one: turbo-charge the long-term strategy of creating universal service with the short-term strategy of creating universal access. Create community resources. Indeed, this route has been tested through the Acacia Project in setting up telecenters, albeit with critical failures in the sustainability model. A lot has been learnt that will aid the Uganda Communications Commission (UCC) in its Rural Telecommunications Development Strategy whose development was supported by IDRC (building on ideas developed by UCC).

Quadrant D:

Here we have low literacy and low ICT penetration. Again, low literacy should not (as is often the subconscious thinking) be equated to lack of intelligence: in Africa, it normally means lack of affordable opportunity to go to school. People who cannot read can hear, and there are many low end ICT technologies that can deliver information in video and/or audio form. Illiterate people can start joining the knowledge society today instead of ten years from now when the literacy challenge and infrastructure challenge would have been (hopefully) addressed.

The illustrations discussed here are simple, and are indeed not really new. What is new is the paradigm within which they are developed, and it is that paradigm that will lead to research in new directions so that we can develop simple new strategies to turbo-charge conventional approaches to bridging the digital divide.

6. THE ROAD MAP

The road map outlined here also spells out areas for research. It is by no means exhaustive or fully thought out, but it provides a starting point and direction.

6.1 *Review the benchmarks that are used to categorise e-readiness. Are they a simple transfer from the developed economies? Are they really applicable in the context of developing countries? Can they be improved? Can better benchmarks be developed?*

6.2 *Developing scenarios: How can this exercise be refined or re-done?*

6.3 *Categorisation of your country in terms of scenarios (benchmarking)*: What are the categories? Are they consistent? Can they really be grouped without falling into the old traps of simple stereo-typing?

6.4 *Developing strategies for falling upwards*: For each scenario, what long-term strategies are in place or need to be put in place to move to the first quadrant in the long term – if indeed it is essential to move to the first quadrant? More importantly, what short-term strategies can ensure that despite current circumstances, the community or country falls upwards to the knowledge society plane? What is the least cost option for implementing any strategy?

6.5 *The litmus test*: Can the strategy be replicated? Is it financially sustainable? Will it lead to quick results? Is it owned by the country? Does it ensure human development as well as equity in the development process?

7. CONCLUSION

Bridging an expanding gap calls for a multi-faceted approach that combines both long and short-term strategies. Long term strategies alone will never bridge the digital divider because it expands faster than it can be bridged. A critical attribute of the short-term strategy is the ability to succeed despite circumstances, the ability to help a community in falling upwards, thus turbo-charging the development process. Such short-term strategies can only be developed if we open up our minds and accept a new paradigm. Ingenuity shall then wait upon altruism and hard business opportunity, and together they will help in bringing our countries to the twenty-first century.

“Be the change you want to see in the world” – Mahatma Gandhi