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ICTs, discourse and knowledge societies: implications for policy and practice

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**ICTs, Discourse and Knowledge Societies:
Implications for Policy and Practice**

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Introduction ¹

'Over the past few decades, information and communication technologies (ICTs) have proven to be a tremendous accelerator of economic and social progress' (UNCTAD 2009: xi). This quotation from UNCTAD's Information Economy report signals a persistent emphasis in policy making on the materiality of technology. It aligns with a strongly Western-centric and universal idea of the contribution of technology to economic growth and development. In contrast, Escobar (2002: 1) highlights the need to craft 'another space for the production of knowledge' and to foster 'another way of thinking'.² In this chapter, I examine the texts of prominent reports on ICTs and development to assess how the marginalisation of alternative knowledges is achieved through the discursive practices favoured by many of those involved in policy-making in this area.

Claims about the *impact* of ICTs often skate over the specificity of their design and use in practice. Generalisations are symptomatic of the tendency to over-emphasise investment in technical innovations. This comes as no surprise because it is consistent with the 'modernization' paradigm (Mansell 1982). My aim is to highlight some of the characteristic features of the discourses which perpetuate this way of thinking and their consequences for policy interventions. I show how alternative discourses are subordinated to the prevailing technology-centric discourses.³ The analysis is based on a sample of texts drawn from reports produced by agencies of the United Nations (UN) and the World Bank, mainly during the 1990s and early 2000s when the potential benefits of the information or knowledge society had achieved a high profile in development discourses.⁴

Knowledge Societies and ICTs

In the post-War period, in parallel with the growing emphasis on the 'information' or 'knowledge' society in the industrialised countries, the potential of ICTs started to become an issue in development planning (Melody 1977).

There have been many initiatives aimed at redressing asymmetries in access to these technologies and to digital information.⁵ In the mid-1980s, the Maitland or Missing Links Report (ICWTD 1984) helped to boost the profile of ICTs. The principal concern was with the expansion of telecommunication networks and reducing the technology gap between the rich and the poor, later labelled the digital divide. This report called for investment in telecommunication networks and service applications to address the exclusion of the poor, mainly in developing countries. Technological innovation in ICTs, including the Internet and the World Wide Web, and later, mobile telephony, sparked renewed interest in the technology gap.

By the time the Millennium Development Goals (MDGs) were announced, then UN Secretary-General Kofi Annan, Annan, like so many others, seemed to have become captivated by the potentially wealth-creating advantages of ICTs (Annan 1997; UN 2000: 55/2).⁶ MDG Goal 8 called upon governments, 'in cooperation with the private sector, [to] make available benefits of new technologies, especially information and communications'.⁷ By 2010 the ICT target was understood to relate to the diffusion of mobile phones and Internet access points (UN 2008: 48; 2010a). Investment in these technologies was linked to their potential to stimulate economic growth - closing this gap was expected to help to close the 'knowledge gap' as well.

A decade earlier, authors of the UNDP's first *Human Development Report* had sounded a warning about the folly of overemphasising technology while neglecting people and their well-being, stating that: 'the real wealth of a nation is its people. ... This simple but powerful truth is too often forgotten in the pursuit of material and financial wealth' (UNDP 1990: 1). As the authors put it, 'the purpose of development is to create an enabling environment for people to enjoy long, healthy and creative lives' (UNDP 1990: 1). Human development is understood here as being about enlarging the choices available to the poor giving a strong emphasis to capabilities, rather than to technology. In 1999, the *Human Development Report* would say: 'human development is more than just achieving these capabilities; it is also the process of pursuing them in a way that is

equitable, participatory, productive and sustainable' (UNDP 1999: 16).⁸ When the World Summit on the Information Society (WSIS), held in Geneva in 2003 and Tunis in 2005 under the auspices of UNESCO and the ITU, was convened, the dominant technology-focused model and alternative models were both in evidence, but the former retained its dominance.⁹

How were these very different models reflected in the texts of reports on ICTs and development published by international agencies in the years between the Maitland report and the WSIS, and subsequent to it?

Dominant Perspectives on the 'Gap'

The dominant model of the way ICTs can foster a global knowledge society is informed by the neoclassical economics model which suggests that 'knowledge is like light'.¹⁰ 'Weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere' (World Bank 1999: 1). The Bank's report on *Knowledge for Development* insisted that 'information problems' or incomplete knowledge about attributes such as the quality of products or the creditworthiness of firms, are knowledge gaps. It was suggested that 'typically, developing countries have less of this know-how than industrial countries, and the poor have less than the non-poor'. The key challenge is, therefore, to ensure access to digital information to overcome the isolation of the poor. 'The new communications technologies promise to reduce that sense of isolation, and to open access to knowledge in ways unimaginable not long ago' (World Bank 1999: 9). There was no differentiation between external and indigenous information. 'For developing countries, acquiring knowledge involves two complementary steps: obtaining knowledge by opening up to knowledge from abroad, and creating knowledge not readily available elsewhere' (World Bank 1999: 7). And the policy emphasis was clear: transfer of knowledge and investment in technology. Effective communication started to be acknowledged as a 'two-way street', but the priority remained 'investing in human capital to increase the ability to absorb and use knowledge ..., and investing in

technologies to facilitate both the acquisition and the absorption of knowledge' (World Bank 1999: 13, 25) from external sources.

Countries were encouraged to adopt policies to 'leapfrog' the industrial countries 'by going straight from underdeveloped networks to fully digitized networks', with the aim being able 'to take advantage of the new information and communications technologies in *disseminating knowledge*' (emphasis added) (World Bank 1999: 57).¹¹ The asymmetric distribution of resources was alluded to, acknowledging that if intellectual property rights (IPR) protection is tightened, this slows developing countries' access to external knowledge resources (World Bank 1999). However, the report was silent on how the poor would be engaged in dialogue and on how the arrival of mobile phones, Internet access and externally acquired 'know-how' would be responsive to their needs. Reducing the 'technology gap' was seen as a means of bringing about 'development'.

To encourage fairer outcomes and reduce exclusion from the knowledge society, governance measures were emphasised in the reports of some UN agencies. UNDP reports in the 1990s were concerned with distributional equity issues, observing that 'when the market goes too far in dominating social and political outcomes, the opportunities and rewards of globalization spread unequally and inequitably—concentrating power and wealth in a select group of people, nations and corporations, marginalizing the others ... the new culture carried by expanding global markets is disquieting' (UNDP 1999: 2, 4). Nevertheless, the solution to poverty reduction was seen as moving towards the knowledge society to 'ensure that the information revolution leads to human development' (UNDP 1999: 10). The Internet was associated with shrinking time and space. Although the spread of ideas and images was seen as enriching the world, the risk of reducing cultural concerns to 'protecting what can be bought and sold, neglecting community, custom and tradition' (UNDP 1999: 33), was noted. The fact that 'technologies designed for the wants and needs of consumers and producers in Europe, Japan or the United States will not necessarily address the needs, conditions and institutional constraints facing consumers and producers

in developing countries' (UNDP 2001: 95) was acknowledged, but the necessary response was seen as global initiatives aimed at research and development and innovations that flow across borders so that developing countries become 'technology followers' (UNDP 2001). By 2004, UNDP was drawing attention to cultural liberties, asking, 'do economic growth and social progress have to mean adoption of dominant Western values? Is there *only one model* for economic policy, political institutions and social values?' (emphasis added) (UNDP 2004: 85),¹² and emphasising people, participation and well-being. There is a suggestion of the beginnings of a discourse on ICTs that might be more sensitive to human development concerns.

In the mid-1990s, UNESCO reports were already emphasising bottom-up approaches to development (UNESCO 1996). In one of its *World Report on Communication*, Hamelink (2000: 34) argued that the interests of the 'North' were driving investment strategies in ICTs - 'In many developing countries, the 'digital rush' is on to ensure connections with the electronic networks for trade, finance, transport and science'. UNESCO later would emphasize that 'every society has its own knowledge assets. It is therefore necessary to work towards connecting the forms of knowledge that societies already possess and the new forms of development, acquisition and spread of knowledge valued by the knowledge economy model' (UNESCO 2005: 17). UNESCO sought to move away from the idea that the (universal or global) 'information society' is based mainly on technological innovation, insisting that this requires 'an empowering social vision that encompasses plurality, inclusion, solidarity and participation' (UNESCO 2005: 27). There were hints here of an alternative model that might contest the over-emphasis on the commoditization of knowledge. Thus, for example, UNESCO reports argued that unless ICT innovations facilitate the capacity of human beings to create shared meaning on the basis of an understanding of difference, they cannot be expected to support 'the miracle of translation', that is, a reconciliation between universality and diversity (UNESCO 2005: 148).¹³

The discourses appearing in these and other reports often juxtapose the

dominant and alternative models them without acknowledging the conflicting assumptions that underpin them. In the WSIS period, the World Bank retained its emphasis on 'information problems' and 'knowledge gaps', for example, stating that 'perhaps the most powerful means of increasing the voice of poor citizens in policymaking is *better information*' (emphasis added) (World Bank 2004b: 7). However, this was to be achieved through public disclosure, citizen-based budget analysis, service benchmarking, and programme impact assessments; the aim being to make 'political commitments more credible, helping to produce better service outcomes' (World Bank 2004b: 89). The role of the media and ICTs were seen as being helpful, but the emphasis was on diffusion. The diffusion of ICTs was expected to drive convergence between leading and lagging areas of the world such that 'globalization and technological progress in transportation and communication potentially provide a wider range of means to bridge the economic distance between leading and lagging areas' (World Bank 2009: 93). Access to knowledge would be easier, potentially enabling the poor to benefit from developments at the world's technological frontier, replicating the earlier successes of the East Asian economies (World Bank 2009: 95). The links between the free flow of ideas and economic development were characterized as being 'somewhat ambiguous and not well researched' (World Bank 2009: 101), but the assumption was that the removal of restrictions on the free flow of ideas automatically would enhance human well-being.

The ITU, which took the lead in organising the WSIS, remained strongly influenced by the dominant model with its focus on the materiality of the technology as the impetus for growth, although it started to adopt a discourse on the need for local communities to make their own choices. Even with a greater sensitivity to local contexts, the discourse continued to be about harnessing 'the power of new technologies to local communities' own commitment to building a better future' (ITU 2006: 3), and about a governance 'trinity' of regulatory separation, competition, and privatization as 'the sine qua non prerequisite for 'win-win' market development' (ITU 2010: 8).

A similar focus was present in UNCTAD reports. Contributors indicated that ‘the evidence suggests that developing countries can increase the probability of catching up to more advanced countries through well-targeted investment in IT and Internet-related technologies’ (Indjikian and Siegel 2005: 698). After the WSIS, a discourse of multi-stakeholderism and participatory approaches started to be visible: ‘reality shows that different technologies have different contributions to make to poverty reduction and that, in order to be effective, pro-poor ICT efforts must be embedded in poverty reduction initiatives (including national development strategies) and best practices (such as multistakeholder and participatory approaches’ (UNCTAD 2006: xxiv). However, this meant the development of master plans, designed to achieve ICT targets to fill the knowledge gap and to foster technology diffusion, albeit through capacity building. Countries were asked to focus on technological innovation and to establish ‘the capacity to generate, assimilate, disseminate and effectively use knowledge’ (UNCTAD 2008: 1). And again there was an emphasis on diffusion, suggesting that ‘in the area of knowledge diffusion and technology transfer, externalities and spillovers can yield enormous benefits for the economy as a whole ...’ (UNCTAD 2008: 7).

With the a similar emphasis on technology and knowledge gaps, WIPO had initiated discussion in the mid-1990s about the global IPR regime and the possibilities for developing countries to protect their indigenous knowledge base. The TRIPS¹⁴ was depicted as offering ‘an opportunity to use intellectual property protection to accelerate economic, social, and cultural development, as well as to increase awareness of intellectual property as a key natural resource in developing nations’ (WIPO 1998: 9). TRIPS was expected to ‘encompass the protection of traditional knowledge and indigenous technology and folklore as they relate to the development needs of the LDCs’ (WIPO 1998: 12), but the emphasis was on the development of technical standards to protect intellectual property. By 2005, the ‘information problem’ was still very much in evidence: ‘effective IP systems – which create incentives for innovation and structures for sharing the results – are key to unlocking this human potential’ (WIPO 2009: 2), but any changes were to be aligned with the TRIPS Agreement (WIPO 2009: 45).

In 2010, WIPO's Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore received a new mandate to undertake negotiations to 'ensure the effective protection of genetic resources, traditional knowledge and traditional cultural expressions' (WIPO 2010: para 14a). This was seen as an inclusive, participatory process aimed at ensuring that a broad range of interests and priorities would be taken into account, but the insistence on enforcing rights of ownership in intellectual property in line with the dominant model was retained.¹⁵

Stiglitz (2010: xiii) has commented that 'one might have thought that with the crisis of 2008, the debate over market fundamentalism – the notion that unfettered markets by themselves can ensure economic prosperity and growth – would be over'. It is not over as far as investment in ICTs is concerned. The ITU continues to call for measures to minimize regulatory risk for private sector investors (ITU 2010: 15) and UNCTAD for competition, tax reductions for ICT firms, infrastructure sharing and allocation of wireless radio spectrum (UNCTAD 2009: xiii). The focus is on technology diffusion to address technology gaps and 'the full right to communicate and participate in the information society' by ensuring that 'the mobile revolution puts a portable handset in the hands of all adults' (UNCTAD 2009: 20).

UNESCO's reports criticise the dominant vision of the knowledge society, but this model is a persistent feature of the prevailing discourse. In *Investing in Cultural Diversity and Intercultural Dialogue*, the 'exogenous modernization paradigm' is criticised because when "'development" is imposed upon a society from the outside, this invariably leads to ecological and societal dislocation' and there is an emphasis on cultural diversity and the deficiencies of 'one-size-fits-all' approaches (UNESCO 2009: 192, 188). The goal is said to be to create conditions in which the diversity of cultural expressions can flourish, stressing that 'cognitive flexibility, empathy, anxiety reduction and the capacity to shift between different frames of reference ... Humility and hospitality are also crucial' (UNESCO 2009: 46).¹⁶

There seems, however, to be no escape from the seductive dominant model. Even in the UNESCO reports, the lure of technological solutions is visible, couched in terms of the benefits of the latest technologies: 'equipped with user-friendly software, inexpensive technical devices and 24-hour connections, audiences participate increasingly in the transmission and creation of information and knowledge, and are fundamentally altering the nature of information production' (UNESCO 2009: 146). Social media, Web 2.0 and the co-creation of content are seen as the means to achieve poverty reduction and the discussion focuses on the *impacts* of new technologies (UNESCO 2009). The implications of these technologies may not be fully understood it is argued, but, nevertheless, what must be supported is the '*transmission* of local and indigenous knowledge and values' (emphasis added) (UNESCO 2009: 108). The institutional landscape is seen as being 'marked by power imbalances' (UNESCO 2009: 137), and the relationship between ICTs and development is seen as being of 'uncertain impact' (UNESCO 2009: 138), with the keyword being 'impact'. The underlying model remains one of linear impact of technologies on people.

On balance, the interpenetration of the dominant and alternative models does not yield departures from the prevailing advocacy for a 'one knowledge system'. The alternative models appear to have had little influence in shifting policy away from a concern with technology and knowledge *gaps* as far as investment strategies involving ICTs are concerned. The next section considers some of the features of the alternative discourses on ICTs and knowledge societies that are slowly starting to take hold at least in some corners of the ICT and development policy debates.

Multiple Knowledges

'Development effectiveness depends, in part, on 'solutions' that resonate with a community's sense of who it is' (UNESCO 2009: 192-3). This statement was attributed to then World Bank President James Wolfensohn in a speech he presented in 1998.¹⁷ The implications of his insight about the need for communities of users of ICTs and digital information to recognise themselves

and be empowered to appropriate new technologies was one that was not taken up in the dominant discourse of those involved in policy making on the role of ICTs in development. McGregor and Sumner (2010: 108) argue, in line with early UN Human Development Reports, that human well-being requires attention to material, relational, as well as subjective, well-being. 'It emphasises that capabilities and conditions cannot be considered in isolation from each other and wellbeing-focused development policy will usually require action that works on *both human capabilities and societal conditions at the same time*' (emphasis added). The capabilities and aspirations of the poor and the structural norms and power relations in the social and economic order clearly matter if ICTs are to be valued by the poor. It continues to be claimed that the evidence on the contribution of ICTs to development is weak at least in terms of the results of quantitative models and of qualitative research as well (Heeks 2010).

One of the lessons to emerge clearly, however, as a result of some of debates during and after the WSIS has been the benefit of participatory approaches to issues of investment in ICTs in the interests of well-being. The WSIS enabled the voices of civil society to be heard, albeit in a highly structured and limited way, at a UN-sponsored Summit meeting in which they were accredited to speak alongside governments and industry participants. This provided for a broader spectrum of voices and for multiple sources of knowledge to be brought into the debates. As a result, some of the discourses of the alternative model started to receive a higher profile than in the period between the MacBride report and the Summit. This sparked renewed hope that dominant voices might be resisted, assisted partly by new possibilities for communication enabled by ICTs such as online social networking.

Arguments in favour of participatory approaches, multiple sources of knowledge, and means of overcoming biases 'favouring knowledge and values that are developed in the North, over the local knowledge, concepts, language and understanding of civil society and staff in the South' (Zirschky 2009: 8) are increasingly visible in the literature on ICTs and development and in the discourses employed by non-governmental organisation (NGO) practitioners

working in development communities. Beardon and Newman (2009: 24) argue that while international NGOs are adopting rights-based and bottom-up approaches to understanding and responding to development needs, 'so many of the structures and systems they employ strengthen or reinforce existing power relations, based on wealth and notions of scientific or expert knowledge'. One of the contributing factors is the adoption of the new ICTs in ways that favour conventions in structuring and peer-reviewing information that have their roots firmly located in the global North.

One response to this has been a call for ICT interventions that are more responsive to the aspirations of the poor, sometimes referred to as 'practice-based, community driven' approaches. For example, Ferguson *et al.* (2008: 13) insist on the need to privilege 'epistemic diversity', 'allowing for other knowledge systems and the specific socio-cultural backgrounds of communities to be taken into account ... This means that 'imported' knowledge is irrelevant unless it recognizes and is aligned with the multiple knowledges of the intended beneficiaries'. The priority is to foster local knowledge capacities. Epistemic diversity means that 'different discourses, different *knowledges* can coexist, rather than placing a single knowledge paradigm at the heart of all development discourses' (Ferguson, *et al.* 2008: 30). The attraction of 'blueprints' or templates premised on the dominant model for ICT policy that do not acknowledge this is attributed partly to the fact that policy makers find it difficult to switch between discourses and commitments (Jones 2009; Powell 2006). Working with multiple knowledges means that meanings must be allowed to emerge through processes that resist universal models of social change.¹⁸ It is argued that complex contested issues can then be dealt with in a way that may begin to subvert 'normal power relationships' (Jenkins 2010: 13). Concepts of multiple knowledges and emergence challenge the epistemological foundations of the dominant models by fostering interpretations of information to form new knowledge, following an 'emergent' pattern: 'a combination of the expected, the unexpected and the unwanted' (IKM Emergent 2010; Mowles 2008: 10; Thompson 2008). In practice, however, it is easy for the new technologies to be appropriated by those who would exploit others and there are challenges in

bringing disparate groups into a dialogue that leads to practices that favour a more open approach to investment in ICTs in knowledge societies.

Conclusion

This analysis confirms that the policy reports by international agencies charged with the challenge of meeting the MDG goals on ICTs are captivated by the idea that 'knowledge is like light'. There has been a shift towards alternative models which emphasise human development, power asymmetries and multiple knowledges. However, there are few signs that this is leading to a substantial change in understanding of the way in which power is exercised in meaning construction around the challenge of enabling investment in ICTs in a way that is valued within local communities.

The dominant model continues to favour measures to address the 'technology gap' and the 'information problem', even when these are accompanied by discourses highlighting participatory processes and local contexts. However, if we regard the relationship between ICTs and development as dynamic and emergent, then intended and unintended consequences must be expected from the actions of the multiple stakeholders involved in forums where the role of ICTs is discussed in international, national and local forums. The consequence of unpredictability may be the possibility, never certain, of new opportunities for participation and dialogue among the proponents of the conflicting models.

Practice-based, community-driven emergent approaches offer a means of fostering a broadly based dialogue. However, on their own they cannot address the conditions that give rise to unequal power relationships, either because of limited resources or because of the different ways in which power is articulated at different levels in a complex decisions making system. Research on the opportunities available to civil society organisations participating within networks of stakeholders in ICT, media and communication policy debates is ongoing (Frau-Meigs 2011; Padovani and Pavan 2011), but if multiple knowledges and emergence are to influence policy in the interests of poverty

reduction, much remains to be done to trace flow of contending ideas and influence, to encourage receptivity to 'emergent' models of ICTs and development, and to critically examine the resource allocations and flows that are privileged by the dominant model, with suggestions for alternatives.

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Notes

¹ This paper initially was prepared for the Communication Technology and Policy (CTP) Section, International Association for Media and Communication Research (IAMCR) Conference 2010, 19-22 July, Braga. A longer version is available as a Working Paper for Information Knowledge Management Emergent (IKME), Working Paper No. 11, see <http://ikmemergent.wordpress.com/>, and a version that discusses the models in greater depth is Mansell (2011).

² Escobar (1995: 13) argues that 'development has relied exclusively on one knowledge system, namely the modern Western one. The dominance of this knowledge system has dictated the marginalization of non-Western knowledge systems'.

3. For criticism of the dominant approaches to ICTs and development, see Avgerou and Walsham (2000); Madon (2000); Nulens and Van Audenhove (1999); and Wade (2002).

4. The sample includes reports by the United Nations Conference on Trade and Development (UNCTD), United Nations Development Programme (UNDP), United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Telecommunication Union (ITU) and the World Intellectual Property Organization (WIPO), as well as the World Bank. Texts produced by the World Summit on the Information Society (WSIS) in 2003 and 2005 are not examined because these are the subject of published studies, see Padovani (2005) and Padovani and Nordenstreng (2005). The selection of texts was based on a keyword search including the terms: 'investment', 'learning', 'impact', 'transmission', 'knowledge', 'information', and 'ICT'. A formal discourse method was not undertaken but a systematic thematic analysis was performed. A

spreadsheet capturing more than 600 paragraphs in which the relevant keywords were used provided the corpus for this analysis.

⁵ These include the MacBride Report (ICSCP 1980/2004) presenting views of academics and policy makers seeking a new world information and communication order (NWICO).

6. The UN General Assembly passed two resolutions on communication for development in the UN system and encouraged decision makers to include it as an integral component in developing programmes and projects in 1995 and 1996.

7. See <http://www.un.org/millenniumgoals/global.shtml> accessed 5/10/2011, Goal 8, Target 5.

8. See Streeten (1982) and Sen (1999).

9 This is evident in the main texts produced by the WSIS which have a strong technology-led orientation, despite concessions to the importance of a 'people-centred, inclusive and development-oriented Information Society' respecting human rights, see UN (2010b); UN/ITU (2003a, b) and (2005a, b).

10. This may also be a conflation of Thomas Jefferson's (1813: 1291).

11. See Soete (1985) for an early discussion of technological leapfrogging and Abramovitz (1986) for factors that enable countries to catch up with the modernizing leaders. Steinmueller's (2001) discussion of technological leapfrogging emphasises the difficulties in undertaking this process, though he ultimately ends on an optimistic note.

12. This report was influenced by Amartya Sen's work.

13. Citing the work of Appadurai (1990) and Bhabha (1996) and of Ricoeur (1992, 2004).

14. The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) forms Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, 15 April 1994.

15 The World Bank's programme on indigenous knowledge seemed to embrace some aspects of an alternative model, though there is almost no mention in its report of the potential of ICTs (World Bank 2004a). The Website for this

programme suggests that it lost momentum. See Boyle (2008) for a discussion of the prevailing intellectual property rights regime.

¹⁶ In line with of 2005 UN Convention on the Protection and Promotion of the Diversity of Cultural Expressions.

¹⁷ Citing Duer (1998).

¹⁸ For example, as espoused by Chambers (2008); Freire (1970/1996); Gumucio-Dagron (2001, 2009) and Gumucio-Dagron and Tufte (2006).