Working Paper 224

Knowledge Management and Organisational Learning: An International Development Perspective

An Annotated Bibliography

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August 2003

Contents

Acknowledgements

The author would like to thank everyone who has shared documents and work in progress, including Kenneth King (CAS), Megan Lloyd-Laney (CommsConsult), Jawed Ludin (BOND), David Mosse (SOAS), Kath Pasteur (IDS) and Surmaya Talyarkhan (ITDG). Thanks also to John Young at ODI for comments.

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Acronyms

AM90s	Africa's Management in the 1990s (World Bank research programme)
BOND	British Overseas NGOs for Development
BP	British Petroleum
CAS	Centre of African Studies (University of Edinburgh)
CIDA	Canadian International Development Agency
CoP	Community of Practice
CSO	Civil society organisation
DANIDA	Danish Ministry of Foreign Affairs
DFID	Department for International Development, UK
EU	European Union
GDN	Global Development Network
GO	Governmental organisation
GTZ	Agency for Technical Cooperation, Germany
ICT	Information and communication technology
IDS	Institute for Development Studies (University of Sussex)
IMF	International Monetary Fund
INGO	International non-governmental organisation
INTRAC	International NGO Training and Research Centre
IT	Information technology
ITDG	Intermediate Technology Development Group
KFPE	Swiss Commission for Research Partnerships with Developing Countries
KM	Knowledge management
MDG	Millennium Development Goal
M&E	Monitoring and evaluation
MKSS	Mazdoor Kisan Shakti Sangathan (Workers' and Farmers' Power Organisation, India)
NGO	Non-governmental organisation
NORAD	Norwegian Agency for Development Cooperation
ODA	Overseas Development Administration of the UK Government (now DFID)
ODI	Overseas Development Institute
PDR	Process documentation research
PM	Process monitoring
PRSP	Poverty Reduction Strategy Paper
RAPID	Research and Policy in Development Programme (ODI)
RAWOO	Netherlands Development Assistance Research Council
RU/EBP	Research Utilisation/Evidence-Based Practice
SDC	Swiss Agency for Development and Cooperation
SIDA	Swedish International Development Cooperation Agency
SOAS	School of Oriental and African Studies (University of London)
UK	United Kingdom
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
US	United States (of America)
WB	World Bank
WDR	World Development Report
WHO	World Health Organisation

Executive Summary

Background

This annotated bibliography aims to review the current literature on knowledge management (KM) and organisational learning, particularly in relation to the international development field. Due to the substantial amount already written on these issues, this paper does not present yet another guideline on 'how to do KM'. Instead, it primarily aims to review the current literature in order to map out the rationale and objectives of KM and learning within international development, and to identify gaps and emerging themes that will be of special interest to development actors and agencies. The bibliography is part of the Research and Policy in Development (RAPID) programme at the Overseas Development Institute (ODI) and will be followed up by future work on operational issues and comparative analysis.

Review of the literature

A very large proportion of the literature on KM and organisational learning is developed by, and aimed at, the corporate sector. Therefore, business rationales of organisational efficiency and financial profit strongly characterise the underlying motivation for much of the KM literature and recommendations. Development agencies can benefit from this in so far as they also need to continually improve organisational efficiency. However, the overarching goal of poverty reduction and the Millennium Development Goals (MDGs) that many development agencies work towards require that KM and learning in the development sector should not only contribute to internal efficiency but also to issues such as improved responsiveness, partnership, and policy influence.

The specific characteristics and challenges of different types of organisations in the development field are reviewed in this paper. Most of the literature focuses on the knowledge needs of Northern and international NGOs, and some of the central authors in this field are highlighted. Some work also exists on KM and learning in relation to bilateral and multilateral donor agencies, and the World Bank as 'Knowledge Bank' has placed a new focus on knowledge issues. However, there is still a lack of literature on the knowledge needs and specific challenges of Southern institutions. A few of the studies that have been carried out are included in this bibliography, and the introduction draws out some of the issues they raise. Even less systematic work has been carried out on the specialised niche of research institutes and think-tanks within international development.

Gaps in the literature and future issues

A few gaps in the literature are identified. These are issues that are of particular importance to development agencies in the current international development context. The first issue is whether KM and learning can increase the responsiveness of development institutions to the situation of the poor; the second is whether KM and learning can increase development organisations' impact on policy; the third question raised is whether KM and learning can improve the translation of development policy into practice; and the final question concerns Southern engagement in international development debates and decision-making processes.

1 Introduction

This annotated bibliography aims to review the current literature on knowledge management (KM) and organisational learning, particularly in relation to the international development field, in order to map out the rationale and objectives of KM and learning in this field, and to highlight gaps and emerging themes that will be of special interest to development actors and agencies. It is part of the Research and Policy in Development (RAPID) programme at the Overseas Development Institute (ODI).

1.1 Background

The purpose of ODI's RAPID programme is that better use be made of research in development policy and practice, in order to promote evidence-based and pro-poor policies. The programme focuses on four areas:

1. Improved knowledge about research–policy links among development practitioners, policy-makers and researchers;
2. Improved knowledge management and learning systems in Southern and Northern development agencies;
3. Helping Southern and Northern researchers, practitioners and advocates to communicate research findings and influence policy more effectively;
4. Improving awareness of the importance of research and how to access it among policy-makers and practitioners, especially in the UK.

This annotated bibliography is linked to the second focus area, namely improved knowledge management and learning systems in Southern and Northern development agencies. Since development policy and practice are largely formulated and implemented by various agencies – ranging from multilaterals, through bilaterals and governments, to NGOs – it is crucial to recognise the significant impact of organisational processes on the links between research, policy and practice.

This paper reviews the current literature on KM and learning, paying particular attention to the literature on KM and learning in the international development field. Due to the substantial amount that has already been written on these issues, this paper does not present yet another guideline on 'how to do KM'. The common elements of a traditional KM organisational strategy are referred to briefly. These include: knowledge mapping; drawing up the value chain of an organisation; gaining the support of top management; putting in place knowledge sharing systems and supportive information technology; updating intranet pages and staff contact information; strengthening Communities of Practice (teams or networks); using stories to communicate effectively; investing in new organisational processes; and encouraging cultural change within the organisation. Those interested in the specific details and timing of these steps in a KM strategy will be able to find out more through the books, articles and reports summarised in the annotated bibliography section. An accessible and easy-to-read introductory guide is 'Learning to Fly' (Collison and Parcell, 2001), and an introductory overview of the same issues applied to development agencies can be found in the report from Bellanet's 2000 KM Workshop (Bellanet, 2000) or on their 'KM4DEV' website (www.bellanet.org/km).

This paper's primary aim is to review the current literature in order to map out the rationale and objectives of KM and learning within international development, and to identify gaps and emerging themes. The paper will be followed up by more operational work on these issues within ODI,

and practical recommendations on KM and learning will also be developed as part of the RAPID programme.

1.1.1 Previous work at ODI

ODI has already examined some of the issues related to KM and learning in international development through both published papers and projects. In 1998, *Development as Process* (edited by Mosse, Farrington and Rew) was published as part of the ODI Policy Studies Series. In particular, the book draws out the importance of social relationships, and the politics of information distribution and use in the context of development projects. It suggests that there is a need for new monitoring and evaluation criteria in the development sector, in order to be able to take into account intangible 'outputs' such as policy impact and institutional change. In 1999, an ODI Working Paper by Baumann, entitled 'Information and Power', reviewed the literature on information processes and the implications for process monitoring. The paper highlights the difficulties in assuming that people in an organisation are willing to share their knowledge freely with other organisational staff. The paper suggests instead that it is more realistic to assume that actors will not be prepared to reveal the knowledge from which they derive their power. This has considerable implications for how to approach knowledge management and organisational learning.

The RAPID programme also builds on previous work at ODI concerning the dynamic of policy processes (Sutton, 1999), and an annotated bibliography and three-dimensional framework have been produced to more clearly map out the linkages between research and policy-making (De Vibe, Hovland and Young, 2002; Crewe and Young, 2002). In 2001, ODI established an Information and Communications Committee to advise on the design and implementation of a KM strategy in the institute. This objective has been strengthened with the appointment of a KM Research Officer in July 2003.

1.1.2 What is knowledge management and organisational learning?

What is knowledge management? As an introductory step it is useful to distinguish between raw information and knowledge (Edwards, 1994). Raw information may be widely available to a number of agencies, but only some organisations will be able to convert the information into relevant knowledge and to use this knowledge to achieve their aims. The processes by which they do this are known as KM strategies. In the section below on KM in the corporate sector, a further distinction will be made between first and second generation KM strategies. While the first generation focused on systematising and controlling existing knowledge and knowledge sharing within an organisation, the second generation KM strategies have shifted towards enhancing the conditions for innovation and knowledge creation (McElroy, 2000).

Challenges and advantages of KM are naturally related to challenges and advantages of organisational learning, and in the international development field these two sets of issues are often examined together. As with the two generations of KM strategies, an organisation's ability to learn from past experiences can also be divided into first and second order strategies (Argyris, 1992). First order strategies concern 'single loop learning', aimed at correcting and modifying practices in order to fit in with an established policy. Second order strategies are those of 'double loop learning', which − in parallel with second generation KM strategies − aim to increase the organisation's capacity to think creatively and act innovatively.

2 Review of the Literature

2.1 Knowledge management and learning in the corporate sector

2.1.1 The information age workplace

A very large proportion of the literature on KM and organisational learning is developed by, and aimed at, commercial businesses and firms. Many organisations in the corporate sector look to KM as a solution to the new challenges of the information age. Knowledge and information are becoming crucial core assets for businesses, who have to learn to handle these assets in new ways. Traditional accounting and monitoring systems designed to deal with tangible inputs and outputs are no longer adequate. Instead, organisations now find that they have to share information internally more efficiently and learn to adapt more quickly to external circumstances in order to retain their competitive advantage. In response to this situation, the 'first generation' of KM strategies aimed to improve knowledge sharing within organisations (McElroy, 2000). The first generation of KM was very focused on information technology and systems; technical tools were used to collect and codify existing knowledge in order to make the organisation run more smoothly.

A 'second generation' of KM strategies has now emerged, which focuses more on organisational processes and the creation of new knowledge in order to keep the organisation one step ahead of its competitors. For example, the most successful organisations are shifting from strategies based on prediction to strategies based on anticipation of surprises (Savage, 2000). They are shifting from management based on compliance to management based on self-control and self-organisation. They are also shifting from utilisation of already known knowledge to the creation of new knowledge, from pure 'technology' KM applications to also include 'process' applications (Binney, 2001).

When and how these shifts should be undertaken depends on the type of organisation in question. Accenture's (2002) presentation of a typology of work settings distinguishes between four different types of organisations – 'process', 'systems', 'network' and 'competence' – based on the different levels of interdependence and complexity that are required in different work situations. For example, the 'competence' model describes a workplace that is highly reliant on individual expertise (low level of interdependence) in order to carry out evaluation and judgement-oriented work (high level of interpretation). The 'network' model denotes a workplace that depends on fluid deployment of flexible teams (high level of interdependence) in order to improvise and meet new challenges as they arise (high level of interpretation). Different work settings require different ways of handling and processing information to create the necessary knowledge.

2.1.2 Significant KM consultants

Some of the most significant and frequently cited authors on KM and learning are Argyris (1992), Senge (1990), Nonaka (1995), Levitt and March (1988), March (1991) and Schein (1992). They all situate themselves within the second generation of KM strategies and work within the corporate sector. While Argyris (1992) and Senge (1990) base their ideas on experiences as management consultants for big Western companies, Nonaka (1995) draws on his experiences from Japanese businesses. Many of their recommendations are similar, especially as they all focus on the importance of thinking about processes and connections. Senge (1990) in particular concentrates on 'systems thinking'. He argues that organisational learning is only successful when it is based on an understanding of how the whole organisational system is connected, rather than a focus on individual parts. Argyris (1992) further develops the idea of learning by distinguishing between single and double loop learning. The objective of single loop learning is to bring organisational

activity back on track. This is no doubt important, but does not foster organisational innovation. On the other hand, double loop learning is the ability of the organisation's members to think critically and creatively about the underlying frameworks.

Levitt and March (1988) are less positive about the capacity of organisations to manage knowledge effectively and to learn from past experiences. Their oft-quoted 1988 article, and a later article by March (1991), highlight instead the considerable limitations that impede organisational learning. These include the complexity of organisational experiences, human habits, hierarchical structures, routines, and differing interpretations by different sub-groups within an organisation. Schein (1992) touches on many of the same issues as Levitt and March, but in a more optimistic manner. He argues that the limitations to learning within an organisation can be overcome through good leadership. By good leadership he means the ability of the leader to guide the organisation through various stages of a change process, to contain anxiety, and influence the organisational culture in a positive way throughout this process.

Malhotra (2001) and Stacey (1995) take a slightly different view on the role of management in relation to learning. They both argue that the most important learning processes within an organisation are precisely those that cannot be managed. They draw on chaos theory to describe 'semi-confusing information systems' (Malhotra, 2001) and 'nonlinear feedback networks' (Stacey, 1995). Innovation often takes place in informal 'shadow' networks of individuals interested in the same issues. In order to support and strengthen this creativity, Malhotra and Stacey argue that organisations should allow staff room to act on incomplete information, trust their own judgement, and feed input from informal fora into formal structures.

2.1.3 Performance measurement

A major concern for many organisations is the need to prove that KM actually adds any value to production processes. At first, traditional accounting and measurement systems were drawn on to demonstrate the increased efficiency that followed from KM applications. However, there were some significant problems attached to these traditional systems. Most importantly, they related to tangible inputs and outputs, and were not well equipped to deal with knowledge as an intangible asset. In addition, traditional measurement systems tended to emphasise costs (to the company's production figures) rather than use or added value (to the company's strategy) (Ahmed and Zairi, 2000). Lately, therefore, a few businesses have been moving towards accounting and measurement systems that capture not only potential increases in production derived from KM, but also increases in intangible assets and strategic advantage (ibid). One of the companies furthest down this road is Skandia, which has appointed a Director of Intellectual Capital who compiles and presents metric indicators of the company's intellectual capital in the annual figures (Marchand, 1998).

Both the traditional measurement systems and the later, more strategically-oriented measurement models are focused on assessing KM through metrics. Performance measurement – even when dealing with intellectual capital, as in Skandia – is defined as 'the systematic assignment of numbers to entities' (Ahmed and Zairi, 2000: 258). This makes it possible to convert uncertain processes into a scale that measures more certain figures of assets, competencies, efficiency, profit and loss. Such models of performance measurement foster 'single loop learning' – i.e. they enable managers to take immediate corrective action if and when processes are seen to become inefficient – but they leave little room for 'double loop learning' (as mentioned above in relation to Argyris, 1992).

2.2 Knowledge management and learning in the development sector

The corporate sector has embraced KM and learning with the aim of improving organisational efficiency – measured in metrical figures of production and profit. In the development sector, organisational efficiency is also important, but it is far from the only aim. Many development agencies today work towards the Millennium Development Goals (MDGs) and measure their degree of success in terms of their impact on poverty reduction and policy change. In order to work towards these larger objectives, agencies not only need efficient internal coordination, but also increased ability to be responsive to the situation of the poor, and ability to influence debates and policy processes. The KM and learning needs of the development sector are therefore different in certain respects from those of the mainstream corporate sector, and recommendations from the corporate KM literature cannot be transferred indiscriminately. In recognition of this, development consultants and authors have started writing about KM and learning specifically in relation to different types of development organisations.

By far the most work has been carried out on KM and learning in Northern or international development NGOs (INGOs). Some of this is linked to the literature on monitoring and evaluation (M&E). A lesser amount of work has also been carried out on KM in large donor agencies, such as the World Bank and some bilateral agencies (perhaps most prominently in Department for International Development, UK (DFID) and Sida). Very little work has focused on the particular KM and learning challenges faced by Southern institutions, and even less on the specialised niche that ODI is especially interested in, namely KM and learning in research institutes and think-tanks, both Northern and Southern. Each of these types of organisations within the development sector are discussed in turn below.

2.2.1 Northern NGOs/INGOs

Changing context and role
The emergence of the information age in the 1990s coincided with the notable increase in numbers and relative influence of Northern development NGOs. The rise of NGOs has prompted extensive reflection on the part they have to play in development, and in the current literature there is a widespread perception that the role of Northern and international development NGOs is changing in significant ways. Northern NGOs are no longer regarded as unquestionably legitimate, but are expected to justify their own legitimacy by building credible relationships with Southern communities and partners (Fowler, 1992). Northern NGOs are also no longer seen as neutral service delivery vehicles, but are taking on the roles of information broker and advocate in the interface between Southern communities and national/international policy processes (Edwards, 1994). Northern NGOs have another new role to play in building the capacity of Southern civil society organisations to process knowledge and engage effectively in national/international development debates and decision-making processes (Keeble, 2002). All this requires NGOs to have high quality internal learning and information processing systems. In addition, calls for knowledge-based aid and the globalisation of knowledge require NGOs to reflect on how their internal KM and learning systems interact with external information flows and policy trends (King, 2001).

Monitoring and evaluation
Although the KM and learning literature in the development field is by no means as copious as in the corporate sector, the changing context and role of Northern NGOs has nonetheless generated a substantial amount of research, ranging from individual organisational guidelines (e.g. Powell, 2003, for Oxfam) and surveys of NGO learning (BOND, 2003), to academic attempts to develop a coherent theory of learning processes within NGOs (Davies, 1998). Much of the literature on

learning processes situates itself within the field of monitoring and evaluation (M&E) (e.g. Marsden, Oakley and Pratt, 1994). Korten (1984) was one of the first authors to point out that organisations evaluate their errors in different ways. When organisations see errors as failures, staff will tend to hide their errors away and little learning will occur at an organisational level. On the other hand, if an organisation sees errors as sources of information, staff will be encouraged to discuss past experiences and to carry forward new knowledge. Korten calls this the 'learning process approach'.

Recently, development agencies have also become interested in means of assessing not only their own learning, but also the intangible impact of their work – e.g. their policy influence. Corporate sector models of performance measurement, as discussed above, have largely avoided this area of intangible impact (focusing instead on how to measure their internal intangible assets and how to display these as metrical figures). In the development sector, a few complementary models have been suggested. In relation to M&E in development agencies and projects, the edited volume *Development as Process* (Mosse, Farrington and Rew, 1998) proposes a new look at the role of monitoring information and organisational relationships. The book suggests that new M&E criteria should be developed in order to take into account intangible development outcomes such as policy impact and institutional change. In addition, such criteria should be monitored through a continuous process, rather than only at the end of a project, so that the information feedback can be used to guide practice on an ongoing basis. Even more recently, Lloyd-Laney (2003) has developed advocacy impact assessment guidelines, mapping out questions and issues that need to be taken into account when designing measurement indicators in this field. Indicators are suggested for the following dimensions: policy formulation and implementation; private sector change; civil society strengthening; democratisation; and improvements in the material situation of individuals.

Particular characteristics

It is worth noting, as King (2001) does, that on the whole the question of KM and learning in relation to development NGOs has led to a focus on internal organisational needs within Northern NGOs, rather than a focus on the dramatic Southern knowledge deficits. The current literature highlights several particular internal organisational characteristics of Northern/international NGOs. These include the following:

- Geographical distance between headquarters and field offices, which frequently leads to certain information gaps and learning tensions (Suzuki, 1998);

- The geographical range of NGOs can also be an advantage in that it gives them a comparative advantage in brokering information from the local, national and international level at the same time (Edwards, 1994);

- The NGO's ultimate 'customers' or 'beneficiaries' are not the same people as the NGO's donors, leading to different knowledge demands in relation to different groups (Roche, 1998);

- There is usually a high need for success stories to legitimate the NGO's existence, which may hinder learning (Roche, 1998);

- While NGOs continually try to bring about change in their environment, they are themselves often characterised by internal 'change fatigue', stemming from information overload and continuous demands for adaptation and response (Madon, 2000; O'Malley and O'Donoghue, 2001).

Emerging challenges

There are a few issues related to KM and learning that are especially challenging for Northern/international NGOs.

- *Who benefits most: North or South?* In a sector that wishes to work towards the overarching goal of poverty reduction, it is important to consider whether the new KM trend contributes to this goal, or whether it is yet another process that benefits the North more than the South. As previously noted, questions of KM and learning in the development sector have predominantly centred on the internal knowledge needs and processes of Northern agencies, rather than on the knowledge gaps and development in Southern institutions. King (2001) suggests that Northern KM projects should aim to escape from their present narrow focus and instead examine Southern knowledge bases and knowledge systems, and find ways of supporting these.

- *Invest in one-way or two-way information flows?* It is not enough for Northern NGOs to improve the efficiency of their information flows without also considering the direction of these flows. Frequently there is far stronger pressure on NGOs to develop a one-way flow of information from the field and 'up' to headquarters and donors, rather than investing in a two-way flow (Edwards, 1994). This is related to the lack of analysis about the knowledge needs of Southern communities. The new focus on partnerships between Northern and Southern institutions may be one way of dealing with this challenge, provided that the partnerships aim explicitly for mutual sharing of information and relevant learning (Drew, 2002).

- *Prioritise field-based or policy-related learning?* Northern NGOs today are expected to perform in far more areas than before. They must not only be engaged in field delivery, but also in research and reflection, debates and decision-making, advocacy and policy influence. This may sometimes lead to difficult choices between investment in field-based learning or policy-related learning (Madon, 2000). It may also generate tension between different types of information within an organisation, as field-based information does not necessarily lead to the same strategic conclusions as policy-related information (Suzuki, 1998).

These emerging challenges for Northern/international NGOs will be discussed further in Section 3.

2.2.2 Bilateral and multilateral donor agencies

In comparison with the growing NGO literature, there is markedly less research and fewer publications on KM and learning within multilateral and bilateral development agencies. The existing KM/learning literature on this type of organisation is mainly concerned with presenting overviews of which type of KM strategies exist in each individual agency (see for example Bellanet (2000) for information about KM in CIDA, DFID, GTZ, Sida, UNDP and the World Bank; KFPE (2001) for a slightly different but related overview of activities related to research for development in DANIDA, DFID, the European Commission, NORAD, RAWOO, SDC, Sida, UNESCO, WHO; and a book on bilateral and multilateral agencies, *Knowledge for Development – Comparing British, Japanese, Swedish and World Bank Aid*, by King and McGrath (2003) – cf. their 'Learning to Make Policy' working papers at www.ed.ac.uk/centas/fgpapers.html). In contrast to the NGO literature, there is little analysis of the specific objectives of adopting KM and learning strategies in these agencies, apart from the obvious and perennial need to improve internal communication and coordination. DFID (2000) highlights the communication and coordination challenges by focusing on the importance of becoming more 'joined up' as an organisation and in relation to external partners. Pasteur and Scott Villiers (2003) argue that communication and coordination in DFID and Sida could be improved if staff were able to prioritise time for thinking and reflection.

The donor agency that stands out in the KM field is the World Bank. This is not so much due to their internal KM strategy – although it is worth noting that they have had success in setting up over 100 thematic groups or Communities of Practice (Denning, 2000) – but rather because of their public image as the 'Knowledge Bank'. The *World Development Report 1998/99: Knowledge for Development*, suggested that the problems of development should be looked at in a new way – from

the perspective of knowledge. The report outlined the harmful results of information problems and knowledge gaps in developing countries, and argued that it was foundational to the entire development enterprise to find ways of dealing with these challenges. Stiglitz (1999), formerly Chief Economist at the World Bank, has also commented on the implications of imperfect information and ways of dealing with this, such as institutional knowledge transfer to Southern institutions. However, he emphasises that local institutions can never be built according to blueprint models, and that any external development agencies involved in institutional capacity building need to take care so as not to short-circuit people's own learning activities and so reinforce their impotence.

The World Development Report and the Bank's image as a 'Knowledge Bank' has been criticised for entertaining an overly narrow knowledge agenda, which neglects both socio-cultural differences and the links to the wider political economy (Mehta, 2001). Critics argue situations of poverty are often linked to wider political realities and cannot simply be alleviated through the provision of information. The Bank also skirts the issue of whether there are any problems in relation to its own role in generating knowledge about developing countries (ibid). The way the World Bank itself handles knowledge through its policy processes, and in comparison to practices in the International Monetary Fund (IMF), has been examined by Coyle (2001). She found that policy-making in both institutions is characterised by a tension between consensus and dissent, in which it is more difficult to incorporate dissenting knowledge into programmes and decisions. Both multilaterals have a need to project an image of having the right answers and maintaining a consensual official line.

2.2.3 Southern institutions

Organisations in different contexts
Organisations function in different ways within different cultural, political and economic contexts. This obviously has implications within the international development field. To put it crudely, the best KM, learning and evaluation strategies in the UK are not necessarily the best KM, learning and evaluation strategies in Uganda. Different groups and organisations (whether they are different due to political circumstances, economic resources, culture, social background or religion etc.) may have different associations to concepts such as 'leadership', 'cooperation', 'information', 'sharing' and 'monitoring'. One example of such differences is given by an anthropologist, Bailey, who examined the notion of 'leadership' in a peasant community in India. He found that traditional leaders function by commanding respect and giving orders; they never ask for 'cooperation'. Therefore, when outsiders such as higher-level politicians or development workers come to ask the villagers to cooperate so that everyone can learn together, 'to the villagers this seems either a joke or something to be very worried about, as a football player would be if he heard himself being urged on and urged to cooperate by the captain of the opposing team' (Bailey, 1971: 308).

The question of capacity building
The context and particular challenges facing Southern institutions is an important topic because it has direct implications for how to approach local institutional capacity building, strengthen local democracy, and support Southern engagement in development debates and decision-making. An illustrative example of this is a civil society organisation in India – the Workers' and Farmers' Power Organisation – which has found ways of using information in new ways to great effect (Jenkins and Goetz, 1999). They have waged a campaign to secure the right of ordinary people to gain access to information held by government officials, and through this have managed to contribute to greater local accountability. How are such Southern civil society institutions strengthened, and what, if anything, do (Northern) development agencies have to contribute to this process? Nicholson (1994) and Nuijten (1992) draw on experiences from Papua New Guinea and

Mexico respectively to show that Western-type institutional models do not automatically translate into a new context without significant adaptations and modifications. They suggest that capacity building projects in the South are overly based on ingrained notions of Western organisational concepts and processes, and argue that the best contribution development agencies can make is to build on local understanding. To a certain degree, this is the same point made by Stiglitz (1999): capacity building or conditionality that is imposed from the outside will not produce lasting change, but only undermine people's incentives to develop their own capacities.

The public sector
Compared to the vast amount of literature on Western institutions, relatively little research has been carried out so far on particular circumstances and challenges facing institutions in the South. The same is true of the literature on monitoring and evaluation (M&E), which is overly based on Western experiences. However, a few studies on specific Southern contexts have been carried out. Rondinelli (1993) examined public sector development programmes undertaken by Southern governments, and found that they were generally excessively control oriented and top-down, thus cutting off the possibility of learning. He argues that this is in part due to expectations of external donors and aid agencies who place a lot of emphasis on coherent national development plans. Frequently, however, plans on paper can be far removed from the reality they are trying to influence.

World Bank research shifts the focus away from the potential tension between external donors and national governments, and instead highlights the tension between external institutional models and indigenous organisational forms (Dia, 1996). In line with new institutional economics theory, the institutional crisis affecting economic management in Africa is due to the structural disconnect between these different institutional forms. An institutional 'reconciliation paradigm' is proposed (ibid). However, another study of African organisations and management suggests that the success of such organisational reconciliation will depend in part on the size of the organisation (Carlsson, 1998). Small businesses seem to be able to draw on different resources to adapt continually to new circumstances, many times out of pure necessity. However, larger organisations and public sector institutions are more constrained due to lack of economic resources, lack of trained personnel, a frequently unstable and therefore risk-averse environment, and centralised state decision-making structures. This results in reduced capacity to manage change, and Carlsson concludes that public sector institutional processes in Africa tend to change as a result of changes in the environment in which they operate, rather than as a result of their own strategic aims.

The non-governmental sector
Hailey and James (2002) build on case studies of nine 'successful' South Asian NGOs in order to comment on how NGOs learn. They conclude that the single most important factor affecting organisational learning is a learning leader. The most important characteristic of the learning leaders in South Asia was not the particular internal organisational strategies that they put in place, but instead their ability to understand and work within a changing and complex environment. On the other hand, Uphoff's (1992) study from Sri Lanka suggests that the critical factor in non-governmental organisational capacity is not necessarily organised leadership. Uphoff examines the success of a large-scale irrigation system and argues that it worked well because it was not planned according to a predictable and fixed model, but rather evolved organically as farmers gradually engaged in flexible systems of cooperation.

Flexibility, however, is a difficult issue in many development contexts, due to different expectations of donors, policy-makers, practitioners and other participants. Non-governmental institutions are often required to provide proof of impact and effectiveness. The realities of M&E in Southern

organisations have been presented in a special issue of *Knowledge, Technology and Policy* where one of the common themes highlighted was 'donor fatigue'. Impact evidence was seen as 'something which is most frequently requested by funding agencies, most frequently promised by evaluators and least frequently delivered in evaluation reports' (Horton and Mackay, 1999). Another theme was the concern that methods used in the field are perceived to lag behind professional development in general.

Technology in Southern institutions

Information and communication technologies (ICTs) are often promoted as the solution to many of the information and communication problems faced by organisations. However, ICT projects in Southern institutions frequently fail or remain functional for only a brief period of time (Heeks, 2002). Heeks attributes this to a gap between the design of Northern IT systems and the reality of Southern institutions, which on the whole do not have the same level of technological infrastructure, local skills base or contextual stability as Northern institutions. In addition, as Volkow (1998) points out, it is not enough to introduce IT systems if organisational management structures or other processes hinder the systems from functioning. Another challenge is the fact that ICT innovation and application in the North is mostly aimed at private companies, while in the South the main client is the public sector (Moussa and Schware, 1992). Public sector organisations have different requirements for handling information in relation to policy-making, consultation and reporting processes, and cannot necessarily adopt the same IT systems as the private sector. Policy recommendations on this issue vary from calls for intensive planning (Moussa and Schware, 1992), to suggestions about mixed teams of technical experts and organisational managers (Heeks, 2002), or knowledge partnerships and the need to engage the private sector (Chapman and Slaymaker, 2002).

2.2.4 Research institutes and think-tanks

Research institutes and think-tanks are a specialised form of institution within international development, and as yet there is very little literature on KM and learning issues specifically in relation to such organisations. However, research institutes play an interesting role in the international development field as the relationships between different actors change, and as international policy processes are opened up to new players. In a policy environment characterised by increasing interconnections and information flows, think-tanks can fill an important niche (McGann, 2002). Think-tanks can potentially 'capture the political imagination' – to use the title of Stone's (1996) book – and provide constructive input into policy processes at all levels. Think-tanks and research institutes can also facilitate collaboration across a wide range of actors and strengthen other organisations in their changing roles. Fowler (1992) points out that as international and Northern NGOs become increasingly dependent on credible relationships with Southern partners, NGO Centres for Study and Development – he gives four examples of such centres – can assist NGOs in building viable relationships, transferring knowledge, and engaging in international development debates.

In a context where the importance of institutional development, engagement in debates, and policy influence is being highlighted, research institutes can potentially have a significant impact through producing policy relevant analysis in accessible formats. Such work will be far more effective if research institutes and think-tanks form networks and alliances in order to work together on topics of common interest (Struyk, 2000), enabling them to engage with policy-makers in a coordinated and more deliberate manner on certain issues (Maxwell, 2002). In this respect it is important to focus on strengthening research capacity in the South (KFPE, 2001). Developments in IT and the

rapid spread of telecommunications infrastructure opens up new possibilities for collaboration between researchers in different geographical areas (Song, 1999).

The function of a research institute or think-tank requires specific strategies for KM and learning. In an institution where knowledge is the key asset, it may be useful to focus simply on whether this asset is mostly reprocessed unchanged or whether it is continually being renewed. March (1991) refers to these two different strategies as exploitation and exploration strategies respectively. Exploitation involves the reprocessing of past or existing knowledge. Exploration aims to develop new knowledge. While a routine-based work environment will have more need for exploitation strategies to capture the best routines, a research institute will need to focus on exploration strategies to remain innovative and ahead of competitors.

3 Gaps in the Literature and Future Issues

There are a few gaps in the literature on KM and learning that are of particular importance to agencies working in the international development field. In this section they are presented under the four headings of responsiveness, impact on policy, impact of policy, and Southern engagement. These are issues that are relevant to development agencies in the current international development context, and which could usefully be linked to agencies' KM and learning strategies.

3.1 Knowledge management/learning and responsiveness

Viable civil society organisations (CSOs) provide a base from which the voice of the poor can be heard in decision and policy-making processes that affect their lives. However, this is only true if CSOs are able to assess and represent the situation of the poor accurately and to formulate appropriate responses. One of the factors determining the capacity of CSOs to do this is their ability to process information and use it in the most effective manner. Can improved KM and learning systems enable them to do this better, i.e. to respond to the situation of their 'beneficiaries' more accurately and effectively? Or is KM in this context an example of the self-absorbed practices that can sometimes make Northern development agencies or elite-based Southern CSOs revolve around themselves? Edwards (1994) answers this question by pointing to NGOs' democratic value base and their emphasis on openness and non-hierarchical communication channels. He argues that these inherent values will enable NGOs to use their information systems and processes to the benefit of the grassroots communities with which they work. King (2001) provides a less idealistic analysis of the situation, emphasising that KM and learning processes do not automatically or necessarily make NGOs more responsive to Southern needs. He voices concerns about the fact that Northern NGOs have so far implemented KM to alleviate their own information blockages – based on the same rationale of efficiency and profit as corporate businesses – rather than using KM to address key questions of how they can contribute to knowledge development in the South.

How is a development organisation's ability to be responsive strengthened? A useful distinction can be made here between 'step thinking' and 'web thinking' (O'Malley and O'Donoghue, 2001). Step thinking can be illustrated, for example, by evaluation tied to the project cycle such as the 'before–during–after' approach (BOND, 2003). 'Learning before' starts by looking at lessons from past projects; 'learning during' a project consists of continuously reviewing project objectives; and 'learning after' a project is carried out by drawing together general reflections and lessons for the future. Web thinking, on the other hand, can be illustrated by partnership learning. The mutual organisational learning that goes on (or ideally should go on) in a partnership is an example of web thinking where different elements are brought into the picture at different points, where ideas are bounced off each other, and where the aim is to try and see the broader picture, without having a step by step answer (Drew, 2002). Any development agency will usually engage in both step thinking and web thinking as means of processing information and learning; the difference between agencies lies in the relative emphasis they give to one or the other of these approaches.

Further work is needed to examine the questions:

- Can KM/learning increase the responsiveness of Southern and Northern institutional processes to the situation of the 'beneficiaries'?
- Can KM/learning help to connect the voice of the poor with the institutional knowledge of development/civil society organisations?

3.2   Knowledge management/learning and impact on policy

Northern development NGOs are increasingly called on to carry out advocacy work based on evidence from the South, and to add value to policy debates both nationally and internationally. Yet experience indicates that NGO programme managers and policy officers are under perennial time and funds pressures to move quickly from concept to implementation, with less space than they would wish for undertaking comprehensive research to strengthen their evidence or undertaking analysis on how to influence policy effectively. Can improved KM and learning systems in development agencies enable them to influence policy processes more effectively? This is a key question that will need to be examined in future work on KM and learning in the international development field.

A related question concerns what type of knowledge and KM strategy will provide strategic advantage for a development organisation wishing to strengthen its ability to influence. In theory one might distinguish between knowledge of the field (bottom-up learning) and knowledge of higher-level negotiation processes (top-down learning or centre-out learning). For development organisations it is important to have knowledge of the field in order to boost their legitimacy and influencing power (Fowler, 1992). This means they need to have good information systems in place in order to process information from the field quickly and effectively – from the right people, to the right people, at the right time (Madon, 2000). An emphasis on field knowledge also means that the higher levels of the organisation have to be willing to learn from staff in field offices and 'on the ground'. However, in order to have an impact on policy, agencies also need knowledge of higher-level negotiation processes, i.e. knowledge of the channels through which to influence and how to go about influencing (Keeble, 2002). This is often a job for senior staff in a development NGO, or staff based at headquarters. They will communicate to field office staff the type of information they need and which channels the information should go through. In these situations learning takes place from the centre-out, i.e. field staff have to learn from the headquarters, based on the past experiences of headquarters staff.

Development agencies most frequently have to display knowledge of the field as well as knowledge of negotiation and policy processes. They need to make use of both bottom-up learning and centre-out learning in their organisation. This situation brings with it much potential tension (Suzuki, 1998). Some of the same tension is shared by large corporations who have offices in different countries. However, agencies in the development sector have an added tension in that they are accountable to at least two different groups of people (Edwards, 1994). Business market analysts have a certain advantage over the NGO sector in that their clients are also their target group and financial supporters (for example, advertisements) (Roche, 1998). This usually means that if they have accurate knowledge of the consumers and their needs/demands, they have a good chance of making a profit. For development organisations, on the other hand, the 'clients' are separate from the funders and the two groups require different 'advertising' strategies. They also constitute two different target groups that organisations need to influence in different ways. This creates a need for strategic knowledge in development organisations that is somewhat further split between knowledge of the field and knowledge of negotiation processes than would be the case in a corporate firm.

This is worth bearing in mind when applying ideas from much of the KM literature to international development organisations. For example, Senge (1990), based on analysis of businesses in the corporate sector, speaks of 'the learning organisation' as if the whole organisation was one harmonious entity where all sections and staff are willing to learn together. This conclusion must be modified in line with the particular tensions experienced by development organisations.

Against this background, further work is needed to examine the questions:

- Can KM/learning help to connect different types of institutional knowledge within the same organisation?
- Can KM/learning help to connect institutional knowledge and policy-making processes?
- Can KM/learning increase Southern and Northern development organisations' impact on policy?

3.3   Knowledge management/learning and impact of policy

It is usual to speak of capacity for 'research uptake' into a policy process. However, it is of little use to influence a policy process unless the policy actually has some impact. This suggests that one should also speak of the capacity for 'policy uptake': How much of a policy is taken up into practice, and how quickly does it happen? How are policies bypassed, reinterpreted, modified and sometimes drastically changed as they are implemented? Why do some policies simply evaporate? There are several factors that influence whether or not, and to what extent, policy ideas and formulations are picked up and acted on by the agents who are the official implementers of policy. The central issue in relation to KM/learning is whether improved KM and learning systems can enable development agencies to translate policy into practice more effectively.

There is increasing interest in examining these issues in the UK. In 1999 the Economic and Social Research Council established the Evidence Based Policy and Practice Initiative, a collaborative network of seven research units aiming to bring social science research closer to the decision-making process (see http://www.evidencenetwork.org). One of the research units involved has produced a framework for understanding the 'evidence into practice' process, emphasising, among other things, the shift from 'researcher as disseminator' to 'practitioner as learner' (Nutley, Walter and Davies, 2002).

However, there are very few case studies documenting what actually happens to development policies in practice. The examples that do exist, mainly within the sociological and anthropological field, only serve to highlight the need for more research on this issue. Lipsky (1980) examines what happens at the point where public policy is translated into practice in human service bureaucracies such as schools, courts and welfare agencies. He argues that in the end policy comes down to the people who actually implement it (the teachers, lawyers, social workers, etc.). They are the 'street-level bureaucrats' and are able to change the planned impact of policy to a large degree. In many instances this is not an intentional action by the street-level bureaucrats, but rather a natural reaction to various pressures such as limited resources, continuous negotiation with headquarters and relations with clients.

Another illustrative example is provided by Mosse (2002). At a recent workshop framed by concerns about how DFID could become a learning organisation, he presented a case study of policy–practice linkages in a rural development DFID project in India. He argued that in this case the policy of participatory development did not primarily serve the function of guiding action. Rather, it served the function of legitimising the action that was taken. Thus, the policy process in this project was not a process where policy was followed through in practice, but instead a matter of practice needing to be followed up by the correct policy model, in order to interpret and justify the actions that had been taken. The representations used concerning 'participatory development' served as successful marketing devices that convinced superiors, secured funds from donors and garnered higher political support.

As these two cases show, the link between policy and practice can be tenuous, and frequently the policy–practice dynamic is played out in a different way to that which the policy-makers and donors had intended. There is therefore a need to learn more about the relationship between policies and practice in international development, focusing on the question of how and under what conditions practitioners take policies into account in their everyday work and in their dealings with donors. Further work is needed to develop an understanding of the following issues:

- Can KM/learning help to connect development policy with implementation of development programmes and projects?

- Can KM/learning increase the ability of institutions to translate policy into institutional practice?

- Can KM/learning increase the ability of institutions to take practice into account in their policy models?

3.4   Knowledge management/learning and Southern engagement

Northern NGOs are called upon to develop new roles. They now have a role to play in a relationship of mutual exchange with Southern NGOs, which involves both information sharing and joint contributions to policy processes. In some situations, Northern NGOs will be called on to support and strengthen the capacity of Southern CSOs to engage with national and international debates and decision-making (Keeble, 2002). As Southern-based agencies improve their own capacity to produce and disseminate research, and as they gain increased access to research from Northern agencies and international networks, they gain power to engage more effectively in national and international debates and policy-making processes. As DFID's latest Research Policy Paper argues:

> 'The evidence suggests that the capacity of developing countries to generate, acquire, assimilate and utilise knowledge will form a crucial part of their strategies to reduce poverty.' (Surr et al., 2002: v)

Can improved KM and learning systems in development agencies enable them to bridge the gap between Northern and Southern development institutions more effectively, facilitating not only Northern contributions to Southern concerns, but also Southern involvement in international development debates? Or will KM prove to be a luxury that only Northern and international agencies can afford, thus widening the gap between North and South?

One way of avoiding a situation where KM primarily works to the benefit of Northern agencies, while passing Southern agencies by, is to combine KM and learning concerns with an explicit focus on Southern knowledge needs and challenges. In some Southern contexts, the most obvious challenges relate to information infrastructure – including the need for increased and improved technical, financial, institutional and human resources (KFPE, 2001). In the edited volume by KFPE, several means of addressing this situation – aimed at Northern agencies – are outlined. For example, Northern institutions can cultivate partnerships with Southern institutions – of which a central component can be information exchange; they can offer visiting fellowship positions in their institutions to Southern colleagues or offer to co-host conferences and workshops that bring Northern and Southern agency staff together; they can engage in more demand-driven research, in association with Southern partners; and they can specialise in institutional strengthening in specific geographic regions and/or related to specific international development themes.

Finally, then, further work is needed to examine the questions:

- Can KM/learning help to connect Southern institutions and Northern institutions/processes?
- Can KM/learning (in both Southern and Northern agencies) contribute to increased Southern engagement in international development debates?
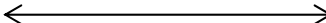
4 Annotated Bibliography

Accenture (2002) 'Typology of work settings', Presentation given at Knowledge Management Seminar, 31 October 2002 at Overseas Development Institute, London.

In October 2002, ODI organised a one-day seminar and workshop on knowledge management (KM). The rationale behind the workshop was that knowledge is, or at least should be, an essential component of evidence-based policy-making; that knowledge is ODI's principle asset in achieving its mission; and that a better understanding of how knowledge contributes to policy and better internal KM systems should make ODI more efficient and effective. Over 30 participants attended the seminar, which focused on the principles and practice of KM in public, private and non-government organisations. Speakers were invited from Accenture, DFID and the Institute for Development Studies (IDS).

Alicia Pickering from Accenture began by defining KM and stated that KM is made up of culture, content, process and technology, and takes time to implement. She presented some practical examples of KM systems: Accenture's own system; a system within the UK Department of Customs and Excise; KM at Compaq; and a KM initiative at the UK Department of Trade and Industry. She emphasised that KM must be tailored to the circumstances of each particular firm and the work of that firm. Work settings differ along two axes: the level of interdependence required, and the complexity of the work itself – as illustrated in Table 1 below. Each work setting operates with different types of knowledge.

Table 1 Typology of work settings

Level of interdependence:	**Process model** • Systematic, repeatable work • Highly reliant on formal processes, methodologies or standards • Dependent on tight integration across functional boundaries **KM: Methodologies, standardisation**	**Network model** • Improvisational work • Highly reliant on deep expertise across multiple functions • Dependent on fluid deployment of flexible teams **KM: Alliances, expert teams**
Collaboration ↕ **Individuals**	**Systems model** • Routine work • Highly reliant on formal procedures and training • Dependent on individual workers and enforcement of strict rules **KM: Automatisation, training**	**Competence model** • Judgement-oriented work • Highly reliant on individual expertise and experience • Dependent on star performers **KM: Apprenticeships, recruit individual experts**

Complexity of work:

Routine ⟵⟶ **Interpretation/Judgement**

Ahmed, Pervaiz and Mohamed Zairi (2000) 'Innovation: A Performance Measurement Perspective' in Joe Tidd (ed.) *From Knowledge Management to Strategic Competence: Measuring Technological, Market and Organisational Innovation*. London: Imperial College Press.

Ahmed and Zairi, from the University of Bradford's European Centre for Total Quality Management, state that clarity concerning performance measurement is a pre-requisite for

establishing what impact, if any, practices such as knowledge management have on business results. They set the scene with a quote from Lord Kevin:

> 'When you can measure what you are speaking about and express it in numbers, you know something about it. (Otherwise) your knowledge is a meagre and unsatisfactory kin; it may be the beginning of knowledge but you have scarcely advanced to the stage of science.' (p. 257–8)

Following this line of thought, the authors define performance measurement as 'the systematic assignment of numbers to entities' (p. 258). During the 1980s, this measurement was primarily achieved through management accounting which generated numbers on productivity and financial profit. However, there were several problems with this measurement model, including technical problems with lagging metrics (up to a month late), and a strategic problem in that accounting systems emphasised the costs – rather than use – of decision-making. New means of measurement were therefore devised. These make use of on-time metrics (hourly or daily) to achieve continuous improvement; the metrics are based on company strategy rather than merely productivity; and they focus on measurement of operational issues. The authors go on to discuss four case studies of measurement and metrics in the Innovative Computing Laboratory (ICL), Hewlett-Packard, Exxon Chemical, and the Imaging Systems Department at Dupont. They conclude:

> 'Innovation managers require data and information which assist them in making business decisions. For example, if the innovation process is beginning to become inefficient, the sooner the manager is made aware of this, the faster the correction can be taken. Performance measures are an important means of providing managers with the information they require in order to innovate both effectively and efficiently.' (p. 294)

Argyris, Chris (1992) *Overcoming Organizational Defences: Facilitating Organizational Learning.* **Boston: Allyn and Bacon.**

Argyris was one of the most cited writers working on organisational learning during the 1990s. In this book based on his experience as a consultant for big companies, he argues that the primary problem facing these companies is not the ability to remember past lessons, but rather the ability to acquire new knowledge. This ability is strengthened when organisations gain an understanding of two key features of their operation: single versus double loop learning, and tacit versus explicit knowledge.

Single versus double loop learning: Argyris claims that one of the largest hindrances to learning is that most organisations learn through single loop rather than double loop learning. To highlight the difference, he describes single loop learning as follows:

> 'When a thermostat turns the heat on or off, it is acting in keeping with the program of orders given to keep it to the room temperature, let us say, at 68 degrees. This is single loop learning because the underlying programme is not questioned. The overwhelming amount of learning done in an organisation is single loop learning because it is designed to identify and correct errors, so that the job gets done and the action remains within stated policy guidelines.' (pp 115–16)

He goes on to suggest that one of the most important aims of a learning organisation is to develop the capacity to engage in double loop learning, i.e. the capacity to think critically and creatively about programme and policy frameworks.

Tacit versus explicit knowledge: Argyris argues that a second major impediment to learning is the fact that most organisations store and use knowledge in tacit rather than explicit form. Contrary to

other writers on knowledge management, such as Nonaka, Argyris views tacit knowledge purely as a constraint to learning and not as a source of learning. Therefore, his advice on how to become a learning organisation focuses heavily on making tacit knowledge explicit – so that it is available to everyone within the organisation.

Bailey, F.G. (1971) 'The Peasant View of the Bad Life', in Teodor Shamin (ed.) *Peasants and Peasant Societies.* **Harmondsworth, UK: Penguin.**

Bailey's ethnographic study of peasant communities in rural India and their relationships with outsiders a few decades ago still has relevance for the challenges of cross-cultural communication today. Bailey argued that most of the foreigners who tried to implement projects among the peasant communities failed to understand the cognitive map of the peasants and therefore the projects invariably failed. For example, Bailey showed that the peasants had very different ideas about the possibilities of planning than, for example, those held by the development workers in the area. Development workers tried to convince the peasants that people are in control of impersonal forces, and that therefore it is possible to make plans, to learn from experiences, to correct the plans, and to reap the rewards. This clashed not only with the peasants' perception of reality, but also with their ideas about how people with resources should behave. Bailey sums it up as follows:

> 'Traditional leaders do not ask for cooperation [but rely on authority]. Outsiders cannot effectively ask for cooperation for peasants. But they do so continually, and to the villagers this seems either a joke or something to be very worried about, as a football player would be if he heard himself being urged on and urged to cooperate by the captain of the opposing team.' (p. 308)

Baumann, Pari (1999) 'Information and Power: Implications for Process Monitoring. A Review of the Literature' *ODI Working Paper* **120. London: Overseas Development Institute. (available at www.odi.org.uk/publications)**

[From the conclusion]
This paper reviews literature from several academic fields in order to examine whether there are conceptual frameworks and/or existing empirical work which invalidate the (Western liberal) assumption underlying process documentation and monitoring (PDR and PM), namely that actors (whether NGO or GO) will be willing to put information in a common pool for access by others from similar or different organisations. The brief review of the literature illustrates that there is abundant literature which invalidates the assumption that one can assume that information will automatically be placed in the public realm. Theoretical development in social theory, anthropology, development methodologies and economics have all pointed to the close relation that exists between knowledge and power. In fact one can assume that actors will not be prepared to reveal the knowledge from which they derive their power; whether this power is the ability to exercise control over large resources, or simply to maintain a margin of survival. Further, the literature suggests that this trend is likely to continue as information generation and exchange become increasingly important components of development projects.

The review of the literature suggests that there is potential for PDR to reveal local realities if one assumes that information will be placed in the public realm. PDR will be most successful if it is used as a tool to interpret local discourse and to explore local power relations with a view to creating situations in which actors can take a risk by placing the information in the public realm. […] There are two broad approaches to an investigation of knowledge construction in the literature: the actor-oriented and the structuralist. […] Actors use information in a behavioural sense

(gaining as much information as possible from the use of a piece of knowledge, possibly to the detriment of other actors); but also in a structural sense (using knowledge in a way that is possible given their underlying position of dominance or subordination relative to other actors). Incorporating this balance into the way in which information is interpreted in a PDR context, as opposed to assuming that information will be placed in the public realm in a non-strategic manner, seems to offer a productive way forward.

Bellanet International Secretariat (2000) 'Knowledge Management for Development Organisations' Report of the Knowledge Management Brighton Workshop, 26–28 June 2000, at the University of Sussex. (available at www.bellanet.org/km/km2)

This is the report from the Knowledge Management Workshop held in Brighton in June 2000. The aim of the workshop was to explore whether development organisations could better meet their objectives through the use of KM models and techniques. It also examined the possibility of adapting KM practices in the private sector to organisations working in the development field. The report contains notes from 23 presentations, covering areas such as knowledge resource mapping, enablers of knowledge access, communities of practice, strategies for virtual collaboration, and getting leadership and organisational buy-in. Presentations also covered case studies of KM in various agencies, including UNDP, DFID, GTZ, Sida, CIDA, Tearfund, BP and Nokia.

The workshop participants discussed, among other things, the difference between information and knowledge, and a suggestion from PANOS was found useful, namely that knowledge is 'the sense that people make of information'. There was recognition of the fact that Knowledge Management is an imperfect term and conjures up notions of control. Some participants preferred the term Knowledge Sharing, while others used Knowledge Action or Knowledge Transformation. Broadly, KM was taken to be 'the power of knowledge used by people to be more effective, realise objectives and learn from each other' (p. 12).

The participants also explored two complementary but distinct approaches to KM: the 'collect and codify' approach, dealing with explicit and tangible knowledge, and the 'connect person-to-person' approach, dealing with intangible and human processes.

Binney, Derek (2001) 'The Knowledge Management Spectrum – Understanding the KM Landscape', *Journal of Knowledge Management* **5(1): 33–42. (available at www.bellanet. org/km)**

Binney sets out to provide a framework of all the existing KM options, applications and technologies available, in order to assist organisations in understanding the range available to them. His framework, entitled the 'KM spectrum', has a two-fold aim: firstly to minimise confusion in the field, and secondly, to provide a quick checklist for organisational assessments. The KM spectrum is made up of six categories or 'elements', each of which captures a particular aspect of the KM field. The author suggests that all current KM applications can be fitted into one of these six categories, as illustrated in the KM spectrum table below (Table 2). The first three elements (comprising transactional, analytical and asset management KM applications) are mostly used by 'technologists' seeking to collect and systematise existing information. The last three elements (comprising process, developmental and innovation/creation KM applications) are mostly used by those KM consultants focused on organisational management and processes. Binney concludes by urging organisations to use the KM spectrum as a tool to choose KM applications from a wider range than they might normally tend to use.

Table 2 KM applications mapped to the six elements of the KM spectrum

Transactional	Analytical	Asset Management	Process	Developmental	Innovation and Creation
• Case Based Reasoning (CBR) • Help Desk Applications • Customer Service Applications • Order Entry Applications • Service Agent Support Applications	• Data Warehousing • Data Mining • Business Intelligence • Management Information Systems • Decision Support System • Customer Relationship Management (CRM) • Competitive Intelligence	• Intellectual Property • Document Management • Knowledge Valuation • Knowledge Repositories • Content Management	• Total Quality Management (TQM) • Benchmarking • Best practices • Quality Management • Business Process (Re)Engineering • Process Improvement • Process Automation • Lessons Learned • Methodology	• Skills Development • Staff Competencies • Learning • Teaching • Training	• Communities of Practice/ Interest • Collaboration • Discussion Forums • Networking • Multi-Disciplined Teams • Virtual Teams • Research and Development (R&D)

Source: (Binney, 2001: 35)

BOND (2003) 'Learning from Work: An opportunity missed or taken?', BOND survey. London: British Overseas NGOs for Development. (available at www.bond.org.uk /lte/think.htm)

This paper is based on two surveys about learning carried out by BOND in 2001 and 2002 – one was a survey of four donor organisations, and the other of 53 BOND member NGOs. The surveys was designed to capture insights about organisational learning tied to the project cycle. In the project cycle, learning is seen as a means to increase organisational efficiency and reduce repetition of mistakes. Learning in this context is divided into three main areas:

- *Learning before*, i.e. learning that happens before a project is started, focusing on taking time to learn from others and drawing practical conclusions from past lessons;

- *Learning during*, i.e. learning that happens while a project is carried out, focusing on continuous reviewing of the project's objectives and the organisation's capacity;

- *Learning after,* i.e. learning that happens after a project has been completed, focusing on giving a structure to general reflection, follow up and future reapplication of lessons.

The NGO survey revealed that most of the NGOs (over 80%) said that they do consciously assess organisational knowledge and skills, although 49% admitted that this only happened sometimes. Around one third (31%) of the NGOs said that they undertake such assessment fairly regularly. However, only a few NGOs said that they undertake systematic monitoring of the impact of previous learning on existing projects. Not surprisingly, 68% of the NGOs said that they would like to see things done differently in their organisation and in donor organisations in relation to learning.

Carlsson, Jerker (1998) 'Organization and leadership in Africa' in Lennart Wohlgemuth, Jerker Carlsson and Henock Kifle (eds) *Institution Building and Leadership in Africa*. Uppsala: Nordic Africa Institute.

Carlsson begins with the proposition that prospects for development in Africa are closely linked to institutional capacity on the continent. He shows that there has been a lack of institutional strengthening due to the historical legacy of colonialism and the attempts of independent African states to continue to implant Western-type bureaucracies and organisational models. This has led to a gap between indigenous institutions and public sector institutions, which in turn has resulted in reduced capacity to manage change. Carlsson suggests that public organisations in Africa are caught in a micro/macro paradox: good results may be evident at a micro-level, but these fail to translate into indicators of progress at a macro-level.

This raises the question of how institutions in Africa operate, what room for manoeuvre they have to learn from past experiences and how they initiate organisational change. As Carlsson points out, management in Africa is far less researched than management in Europe or in the US. However, it seems plausible that managers in Africa are relatively more constrained than their Western counterparts by lack of economic resources, lack of trained personnel, an unstable and therefore risk-averse environment, and centralised state decision-making structures. In this situation it is understandable that leaders of African public-sector institutions will focus more on the short-term than the long-term, and will try to reinforce organisational stability rather than risk and change. Carlsson draws the conclusion that a change in public-sector institutional processes in Africa is fairly dependent on changes in the environment in which the institutions operate.

Institutional processes in small businesses, on the other hand, seem to be relatively open to change. This is probably because small businesses in Africa are forced to continually adapt to new circumstances if they are to survive at all.

Chapman, Robert and Tom Slaymaker (2002) 'ICTs and Rural Development: Review of the Literature, Current Interventions and Opportunities for Action' *ODI Working Paper* 192. London: Overseas Development Institute. (available at www.odi.org.uk/publications)

[From the executive summary]
This paper investigates the role that information and communication technologies (ICTs) have to play in developing countries, focusing particularly on those rural areas that are currently least affected by the latest advances in the 'digital revolution'. The need for flexible and decentralised models for using ICTs is discussed in the context of 'content and control'. The challenge of achieving rural development goals by supporting knowledge and information systems is analysed through an epistemological perspective illustrated by case studies from the literature and the authors' research on the operation of these systems at the community level. The concept of building partnerships at the community level based around information exchange is explored, using ICTs to improve systems for the exchange of information sources that already exist locally and also providing established information intermediaries with the facilities to enhance their capacity for information sharing.

Responsibility for incorporating technological innovation in ICTs into development strategies has traditionally fallen to those with the mandate for infrastructure within governments and development agencies. This is largely due to the large scale and high costs of building telecommunication, electricity and, to a certain extent, broadcasting networks. As the technology becomes more powerful and more complex, with satellite-based and fibre optic cable networks encircling the globe with increasing density, the position of ICTs within this infrastructure mandate

is unlikely to diminish. ICTs, however, also consist of a wide range of equipment nowadays that can be operated individually or within small, local networks that do not require vast infrastructure investments. Long lasting batteries, solar and wind-up power sources are now being used to enable ICTs to operate in remote areas. This paper focuses principally on the role of ICTs as flexible and powerful tools for social development through small scale strategic interventions, linking to, and extending beyond, formal and centralised systems operating on a larger scale.

The paper concludes that there are numerous, well established barriers to improving information exchange. Knowledge capture, the high cost of information access and infrastructure constraints all affect the equitable distribution of information in rural areas. However, technological advances in ICTs have reduced the cost and increased the quantity and speed of information transfer dramatically. This is set to continue and the technologies are already being designed to accommodate a wide range of user choices. The need for a concerted effort to build knowledge partnerships and to engage the private sector and technology drivers in the pursuit of rural development goals is paramount if ICTs are to have a role in future strategies.

Collison, Chris and Geoff Parcell (2001) *Learning to Fly: Practical Lessons from one of the World's Leading Knowledge Companies*. **Oxford: Capstone.**

This publication aims to be an accessible and lighthearted book on the challenges and possibilities of knowledge management. The authors draw on their experience of implementing knowledge management strategies in BP, one of the world's largest organisations, and several smaller organisations they have worked with. Their account of the tools they used, the problems they faced and the different solutions they tried out are meant to enable the reader to reflect on his or her own organisational context and possibilities. The recommendations given range from universally applicable advice ('Start by asking simple questions'; 'What is the main issue you have to deal with?') to models of information processes and knowledge sharing behaviours. The authors suggest that it is usually helpful to implement learning as a 'before–during–after' process, and spend a chapter on each of these three learning steps. They also point out the importance of connecting people and of fostering cooperation, and emphasise that cooperation and asking for help should not be construed as a weakness.

Coyle, Erin (2001) 'Consensus and Dissent in Washington: Negotiating Change in the World Bank and IMF', MPhil thesis. Cambridge: Centre of International Studies, University of Cambridge.

The attitudes of the Washington multilaterals, the World Bank (WB) and International Monetary Fund (IMF), are often labelled the (post) Washington 'consensus'. However, the policy-making processes in these two multilaterals are, as in any other institutions, characterised by a tension between consensus and dissent. The institutions in question are not wholly rational and technical policy-making machines, but rather complex social systems. One of the aims of Coyle's thesis is to examine how, and to what extent, these policy processes are able to draw on wider debates and new ideas, and to convert new ideas into policy formulations in order to create evidence-based policies. The author does this by using poverty and PRSPs as a focal point. The introduction and implementation of PRSPs in the WB and IMF's policy processes originally relied on a reorientation of the multilaterals' complex institutional processes towards the single goal of poverty reduction. But formulating evidence-based policies for poverty reduction presents the WB and IMF with a difficult challenge. On the one hand, they need to be able to engage in a broad and informed poverty debate, which involves drawing in new perspectives and redefinitions of poverty, in order to accommodate global shifts and revitalise themselves as institutions. On the other hand, established

organisational perspectives and processes are often deeply ingrained, and the new agenda of PRSPs also needs to be integrated with the institutions' needs to present 'an official point of view'. The thesis seeks to highlight how the tension between consensus and dissent in the WB and IMF has an impact on the PRSP policy process, and, vice versa, how the PRSPs have brought out the consensus/dissent dynamic in the institutions. The findings are based on both documentary evidence and interviews.

The study found that the WB is in a particularly interesting position when it comes to issues of consensus and dissent. Given its wide brief and need to incorporate staff from different disciplines, it might be expected that its problems would come from an excess of dissent, rather than an excess of consensus. However, Washington Consensus views still hold sway and impact on diverse elements of the Bank's activities. There may be several reasons for this, including internal incentive structures, internal training of Bank field officers and external status. In comparison, it appears that the Fund has not had difficulty obtaining internal consensus on many issues, but on very different grounds from the Bank. There are several potentially valid reasons for this, including its role as international financial crisis manager. The Fund is expected to be able to respond quickly and efficiently to difficult international situations. These circumstances require decisive action that may not leave much time or room for accommodating differing views or dissenting opinions. In addition, the Fund – to a larger extent than the Bank – employs a majority of economists.

The thesis concludes that from a policy process point of view, the most important element of the PRSP process is the implication that the Bretton Woods Institutions move away from prescribing policy for borrowing countries, and instead enable countries to take charge of pro-poor decision-making and decide poverty reducing policies for themselves. However, this element of the PRSP initiative is in tension with the current atmosphere in the Bank and the Fund around projecting an image of having the 'right answers', and needing to maintain a consensual 'official line'. Allowing countries to decide policies themselves would only add dissenting voices to the debate, voices that the Bank and Fund have difficulty incorporating at the best of times. Therefore, although the PRSP process could have a profound effect on the policy-making processes at the WB/IMF, this potential has not been realised, and there are several factors that hinder it from being realised.

Crewe, Emma and John Young (2002) 'Bridging Research and Policy: Context, Evidence and Links', *ODI Working Paper* 173. London: Overseas Development Institute. (available at www.odi.org.uk/publications)

Crewe and Young have developed an integrated framework for examining and understanding the relationship between research and policy. They argue that ideas percolate into development discourse and people learn about how the world is ordered through their practical experience of it. The paper fuses literature on political interests, formations of actors, and discourses, taking account of the role played by wider civil society and 'street bureaucrats', and borrowing ideas from psychology and marketing. They create a three-dimensional approach to assist the investigation into the impact of research on policy:

A. The Context: Politics and Institutions
B. Evidence: Credibility and Communication
C. Links: Influence and Legitimacy

The authors recommend an historical, contextual and comparative methodology, the aim of which would be to create a narrative of policy continuity and change and assess the impact of research on policy processes in particular areas. The similarities and differences between areas would shed light on: (a) how research has been shaped, used, ignored or reinterpreted by policy-makers; and

(b) how researchers could more effectively contribute to evidence-based policy-making. The paper concludes with three hypotheses, stating that research is more likely to contribute to evidence-based policy-making that aims to reduce poverty, alleviate suffering or save lives if:

- it fits within the political and institutional limits and pressures of policy-makers, and resonates with their ideological assumptions, or sufficient pressure is exerted to challenge those limits;

- researchers and policy-makers share particular kinds of networks and develop chains of legitimacy for particular policy areas;

- outputs are based on local involvement and credible evidence and are communicated via the most appropriate communicators, channels, style, format and timing.

Davies, Rick (1998) 'Order and Diversity: Representing and Assisting Organisational Learning in Non-Government Aid Organisations,' PhD thesis. Swansea: Centre for Development Studies, University of Wales. (available at www.mande.co.uk/docs/thesis.htm)

[From the thesis introduction]
The aim of this thesis is to develop a coherent theory of organisational learning which can generate practical means of assisting organisational learning. The thesis develops and applies the theory to one class of organisations known as non-government organisations (NGOs), and more specifically to those NGOs who receive funds from high income countries but who work for the benefit of the poor in low income countries. Of central concern are the processes whereby these NGOs learn from the rural and urban poor with whom they work.

The basis of the theory of organisational learning used in this thesis is modern evolutionary theory, and more particularly, evolutionary epistemology. It is argued that this theory provides a means of both representing and assisting organisational learning. Firstly, it provides a simple definition of learning that can be operationalised at multiple levels of analysis: that of individuals, organisations, and populations of organisations. Differences in the forms of organisational learning that do take place can be represented using a number of observable attributes of learning which are derived from an interpretation of evolutionary theory. The same evolutionary theory can also provide useful explanations of processes thus defined and represented. Secondly, an analysis of organisational learning using these observable attributes and background theory also suggest two ways in which organisational learning can be assisted. One is the use of specific methods within NGOs: a type of participatory monitoring. The second is the use of particular interventions by their donors: demands for particular types of information which are indicative of how and where the NGO is learning.

In addition to these practical implications, it is argued that a specific concern with organisational learning can be related to a wider problem which should be of concern to Development Studies, described as 'the management of diversity'. Theories, organisations and larger social structures must all manage diversity. They must sustain a degree of order and coherence, while being responsive to important differences in their environment. In managing to do so they may constrain or enable others, affecting the scale of diversity possible thereafter. The management of diversity can be analysed descriptively in retrospect, and prescriptively in anticipation, at multiple levels of aggregation.

Denning, Steve (2000) 'Knowledge Management at the World Bank' in *Knowledge Management for Development Organisations***, Report of the Knowledge Management Brighton Workshop 26–28 June 2000, University of Sussex. Canada: Bellanet International Secretariat. (available at www.bellanet.org/km/km2)**

Steve Denning, in charge of Knowledge Management at the World Bank, shared his view of internal KM processes with other participants at the Bellanet workshop in June 2000. He used a story from the Bank's experience to illustrate the value of Communities of Practice (CoPs):

> '…the story of the World Bank's response to the Pakistani Government's request for advice on premature highway failure and different technologies that could be used to remedy this problem. The request was made all the more urgent by the fact that the government was taking a decision on this the following week. In the past the World Bank would have sent a team to produce a report with due process of research, consultation, collation and verification to address the request, but their advice would have come too late to solve a pressing problem. Instead the team contacted the community of highway experts in the field (about 300 persons) inside and outside the World Bank via E-mail to ask for help. There were many responses from countries including Jordan and Argentina addressing the problem. Also, there were responses from those outside of the World Bank, such as the South African Highway authorities response pointing to the New Zealand experience in this area. In this way, the World Bank was able to present a client with a slice of the global experience to address specific problems in Pakistan. The experience was edited for re-use and put into the knowledge base of the organisation so that any client would have access to this material.' (p. 23)

The Bank now has over 100 CoPs or thematic groups which link people across regions and which connect people inside and outside the World Bank. The Bank has a number of sector boards that manage the different groups and ensure that they feed into the Bank's organisational structures and processes. Denning went on to present his 'seven universal laws of knowledge management':

1. Knowledge sharing is key to organisational survival.
2. Communities of practice are the heart and soul of knowledge sharing.
3. Passion is what drives communities of practice.
4. Knowledge sharing is at some point confused with information technology.
5. Middle management resists knowledge sharing because they have built their careers on control vested in vertical structures and knowledge management drives horizontal highways across the organisations.
6. Storytelling inevitably emerges.
7. Knowledge management is a way of doing the organisation's business.

De Vibe, Maja, Ingie Hovland and John Young (2002) 'Bridging Research and Policy: An Annotated Bibliography', *ODI Working Paper* **174. London: Overseas Development Institute. (available at www.odi.org.uk/publications)**

This annotated bibliography, carried out as part of ODI's Research and Policy in Development (RAPID) Programme, contains summaries of 100 documents from various streams of literature relevant to the issue of 'Bridging Research and Policy'. The bibliography contains a narrative summary of the literature reviewed, and the summaries are divided into three key themes that roughly, though not completely, correspond to the three dimensions elaborated in the framework paper 'Bridging Research and Policy: Context, Links and Evidence' (Crewe and Young, 2002):

1. The political context
2. The actors (networks, organisations, individuals)
3. The message and media

New subject areas are been examined that are not usually included in reviews in the research–policy field, such as social psychology, marketing communication, and media studies. Where appropriate the mainstream literature has been supplemented with alternative viewpoints.

DFID (2000) *Doing the Knowledge: How DFID Compares with Best Practice in Knowledge Management*. London: Department for International Development. (available on www.dfid.gov.uk)

This paper springs out of the recognition that 'Knowledge is a key resource for DFID and increasingly one of our products'. It also points out that apart from the Information Management Committee, KM initiatives are often not coordinated across the organisation. This is a disadvantage, as one of the central aims of KM is to contribute to 'joining up': the author of the paper argues that DFID needs to be joined up internally, within Whitehall, and with partners. This is viewed as largely a matter of creating the right environment and culture for sharing and learning, rather than a technical IT issue. The paper gives several recommendations, based on a review of best KM practices within a number of other organisations ranging from governmental to private and non-governmental organisations:

- Make use of managed learning networks, or Communities of Practice. For example, the World Bank has over 100 thematic groups, organised as email networks with both Bank staff and external experts. Each group has its own Intranet page. An existing example in DFID is the Livelihoods Connect site (http://www.livelihoods.org/).

- Encourage informal learning networks. These function in the same way as managed learning networks, but without any additional resources.

- Design electronic Yellow Pages. BP has put into place a corporate directory of staff where each individual is responsible for maintaining their page.

- Use learning reviews: brief meetings held before, during and after a particular event or activity.

- Build learning into key processes. The paper suggests that learning should be incorporated into management and implementation processes. Incentives for this are created by linking it to funding.

- Encourage working with people not in the same 'box'.

- Institutionalise mentoring systems.

A final interesting point in the paper is the questioning of the term 'knowledge management'. The author reports that several of the organisations reviewed preferred to use other terms, e.g. 'knowledge sharing' or 'working smarter'. It is suggested that DFID should similarly consider adopting an alternative term to knowledge management.

Dia, Mamadou (1996) *Africa's management in the 1990s and beyond: Reconciling indigenous and transplanted institutions*. **Washington DC: World Bank. (available at http://www-wds.worldbank.org)**

[From the World Bank's website, www.worldbank.org]
Contrary to traditional Afro-pessimism, the World Bank's Africa's Management in the 1990s (AM90s) research programme illustrates that Africa possesses a substantial reservoir of capacity endowments and best practices on which to build in order to improve the institutional and economic performance of the continent. While not denying the existence and extent of the economic crisis, the AM90s research illustrates that institutional reconciliation will be a key to the institutional and economic development of Africa. More importantly, the proposed solutions are mostly homegrown and are therefore likely to strengthen self-sufficiency and reduce dependency on foreign assistance. The overarching theme of the research is that the institutional crisis affecting economic management in Africa is a crisis of structural disconnect between formal institutions transplanted from outside and indigenous institutions born of traditional African culture. Building on the findings and recommendations of the new school of institutional economics, the AM90s research posits that both formal and informal institutions are here to stay and are needed in Africa, but in a more flexible form. It is through adaptation that formal and informal institutions can converge and build on each other's strength, transaction costs can be reduced and institutional performance maximised. This process for building convergence is at the heart of the institutional reconciliation paradigm proposed in the report.

Drew, Roger (2002) 'Learning in Partnership: What constitutes learning in the context of south-north partnerships?', *BOND Discussion Paper*. **London: British Overseas NGOs for Development. (available at www.bond.org.uk/lte/think.htm)**

Drew's paper was commissioned by BOND to explore issues concerning learning that occurs within partnerships between Southern and Northern organisations. The first issue he examines is power. Unequal power relations between Southern and Northern institutions may easily lead to a one-way relationship of the North 'teaching' the South – rather than facilitating the access and impact of Southern voices in policy processes. This is frequently linked to what he terms 'conventional' capacity building, where the Southern institution is seen as a delivery mechanism for Northern-generated development programmes, rather than as an actor in its own right. In 'teaching' or 'conventional' North–South relationships, learning is transferred one-way from the Northern organisation to the Southern one. Drew argues that it would be beneficial to attempt to focus more on mutual learning partnerships, where both the Northern and Southern institution learns something from the other. This would, for example, facilitate a process whereby experiences and findings from action learning in the South are used to inform policy processes in the North.

The paper outlines three rationales behind learning in development, three levels of learning, and two types of learning.

Rationales behind learning:
- Learning as a technical tool to an end, mainly to increase efficiency;
- Learning as a means of connecting different development actors;
- Learning as the 'heart' of development.

Levels of learning:

- Project cycle level (before–during–after);
- Organisational level, but mainly within distinct sections or aspects of the organisation;
- 'Learning organisation' level, which focuses on the interaction between all sections and aspects of the organisation.

Types of learning:

- Currently valued learning – e.g. project writing, monitoring, reporting, learning to use new buzzwords;
- Currently undervalued learning – e.g. local language, long-term commitment, learning based on differences in history and poverty level, dialogue.

Drew then fits these different pieces together, and suggests that when learning is seen as a technical tool it is often associated with project cycles and with conventional capacity building, in which teaching/learning is transferred from the North to the South. At the other end of the spectrum, where learning is seen as an important development activity in its own right, it will foster characteristics of the 'learning organisation' and will promote mutual learning partnerships between Southern and Northern institutions.

Edwards, Michael (1994) 'NGOs in the age of information' *IDS Bulletin* **25(2): 117–24.**

Edwards links the rise of NGOs within the development field to the emergence of the information age, and poses the question of whether NGOs have a comparative advantage in linking information, knowledge and action in an efficient and relevant way. He suggests that NGOs have a distinctive competence in this area due to three factors:

1. NGOs have direct access to fieldwork and local accounts.
2. NGOs usually have offices that span the different levels of the global system, and therefore information can flow easily between the grassroots, NGO local offices, NGO headquarters, and NGO lobbying activity in global centres.
3. NGOs' value base implies a democratic approach to communication that emphasises openness, sharing and non-hierarchical communication channels.

NGOs rely on their distinctive competence in handling information for four main purposes. The first and second purposes concern their own management systems and strategic plans, and their processes of institutional learning. The third purpose is for advocacy. NGOs have realised that they have a far greater chance to influence government and donor policy if they are able to make systematic use of grassroots information in their advocacy work. The fourth purpose is one of accountability. NGOs face increasing pressure to evaluate the impact of their work and to stand accountable to various stakeholders, both upwards to donors and downwards to the communities in which they work. The danger with multiple accountabilities is that upwards accountability may carry more weight than downwards accountability, which in turn may result in a one-way information flow away from the field rather than in both directions.

Edwards reviews possible barriers to information use in NGOs: internal organisational obstacles; problems with representativity and the images that are used; and the gap between raw information and knowledge. Possible solutions include organisational decentralisation, viewing information as an integral part of all organisational processes, emphasising the need for information to be relevant, and taking advantage of the opportunities provided by IT.

Fowler, Alan (1992) 'Prioritizing Institutional Development: A New Role for NGO Centres for Study and Development', *IIED Gatekeeper Series* No. 35. London: International Institute for Environment and Development.

Fowler introduces his topic by describing the new international order of a post-Cold War world, characterised by increased interdependence, waning sovereignty, a renewed emphasis on democratisation, heterogeneity and pluralism, and new openings for state–society relations. Most importantly, he argues that Third Sector organisations are becoming a stronger force in the new global dynamics. If development NGOs are to take advantage of this opportunity, they need to actively work on their self-development.

Fowler elaborates on three organisational areas that he deems critical: identity, relations and performance. All these three areas depend to various degrees on efficient and credible information flows:

1. *Identity*: Issues of organisational identity – such as vision, ownership and leadership – should primarily be sourced from an organisation's reflection on its actions.

2. *Relations*: International or Northern NGOs are becoming increasingly dependent on credible relationships with their 'beneficiaries' and Southern partners. One of the ingredients of a partnership is mutual exchange of information and mutual learning.

3. *Performance*: NGOs evaluate their own effectiveness by assessing the suitability and relevance of their practices against the needs of the local communities they work with. This requires accessible information about the results of previous practices and reliable information about each context.

There are specialist institutions that help NGOs to improve on these issues. Fowler briefly describes four NGO Centres for Study and Development: the El Taller initiative in Spain; MWENGO – an initiative aimed at Eastern and Southern Africa; The Centre for Dialogue on Humanitarian, Peace and Development Issues (CDHPDI) which focuses on the Horn of Africa; and The International NGDO Training and Research Centre (INTRAC) in Oxford. Fowler concludes that these centres can play an important role in helping NGOs exchange information, learn from each other and coordinate their approaches.

Hailey, John and Rick James (2002) 'Learning Leaders: The Key to Learning Organisations', *Development in Practice* 12(3/4): 398–408.

This article attempts to answer a few important questions related to learning NGOs by drawing on experiences from nine 'successful' South Asian NGOs and their learning processes (including BRAC and PROSHIKA in Bangladesh, BAIF and Sadguru in India, and AKRSP and IUCN in Pakistan). The first question is why learning is seen as so significant for NGOs today. The authors explain this by referring to the volatile political and economic environment that NGOs faced in the 1990s, which required them to change at a faster pace than before. Northern NGOs have also had to learn to find new roles as the importance of Southern civil society institutions is increasingly emphasised. The second question is whether NGOs are natural learners. This is answered in the negative; the authors argue that NGOs have to implement deliberate learning strategies if they are to have any success in this area. Thirdly, how do successful NGOs actually learn? This question is explored by drawing on the South Asian case studies. Central points are briefly reviewed, including: learning from the poor; learning from practice; learning through staff participation; learning from external actors; learning from formal training; learning through research; and learning from monitoring and evaluation. The glue that holds these disparate elements together is the organisational culture, and in particular the attitude of the NGO leadership towards learning.

The authors sum up by saying that at the heart of a learning organisation is a learning leader. Leaders are, of course, particularly influential members of an organisation, and their opinions and moods are quickly picked up by other members. Their views therefore permeate most organisational processes. The authors found that the most important characteristic of the learning leaders of the South Asian NGOs was their ability to understand and work within a changing and complex environment. Indeed, this ability was far more important than the specific learning strategies that they advocated, which seemed to be of less importance. Some of the learning leaders emphasised formal learning, others emphasised informal processes, while yet others focused on learning from new technologies and applied research. However, the result they were able to produce was similar in all cases: their organisations were able to respond to changing circumstances in order to carry forward their vision.

Heeks, Richard (2002) 'Failure, success and improvisation of information systems projects in developing countries' ***Development Informatics Working Paper*** **11. Manchester: Institute for Development Policy and Management, University of Manchester. (available at http://idpm.man.ac.uk/wp/di/index.html)**

This paper begins with the observation that most information systems in developing countries fail either totally or partially. This trend has not been halted by the recent spate of ICT projects initiated by development NGOs and the private sector, despite the ICT rhetoric of success. The author argues that the reality of frequent failure of information systems projects is a problem that should be taken seriously within development, as it keeps developing countries on the wrong side of the digital divide. He suggests that the high rates of failure can begin to be addressed by examining the design–reality gap that exists in so many information projects. Success and failure depend on the size of this gap. The design–reality gap is evident in three related spheres:

- *North–South gap*: The gap between the design of Northern information systems and the reality of Southern institutions where they are transferred to. As a generalisation, one could say that institutions in the South do not on the whole have the same level of technological infrastructure, local skills base or contextual stability as institutions in the North.

- *Hard–soft gap*: Information systems tend to be designed on the assumption that they will operate in 'hard' rational environments, i.e. environments where the emphasis is on standardised information, formal and predictable decision-making processes, and rational staff who try to find optimal solutions based on logical criteria. However, the reality in many development projects and Southern institutions is that 'soft' factors, such as contingent information, informal contacts, and ability to be flexible in an unstable environment, are more important.

- *Private–public gap*: In the North, the ICT innovation and application fields are dominated by private companies who often design information systems targeted at the private sector. In the South, however, the public sector still plays a far larger role in these fields and is also often the target of information systems projects. The private–public gap becomes problematic when information systems from the private sector in the North or South are transferred to the public sector in the South. Just one example relates to the policy-making, consultation and reporting processes that public sector organisations are required to incorporate into their handling of information, and which differ substantially from private sector processes.

Against this background, Heeks suggests that information system projects within development should aim to:

- Analyse the realities of the target organisations;
- Draw on the expertise of both technical designers and organisational managers;

- Raise awareness of the design–reality gap among companies and institutions (including donors) that are instrumental in transferring Northern information systems to Southern institutions.

Horton, Douglas and Ronald Mackay (eds) (1999) 'Evaluation in Developing Countries: Experiences with Agricultural Research and Development' *Knowledge, Technology and Policy* **Special Issue 11(4).**

[From review by Capacity.org, www.capacity.org/pubs/annotations/issue2_k_t_p.htm]
This Special Issue of KT&P reflects an initiative of the International Service for National Agricultural Research (ISNAR) to invite evaluators from the South to present their experiences on evaluation. Evaluation is becoming increasingly important for public and private organisations. Also, the trend can be observed that national organisations are using evaluation more and more to improve their own decision-making and performance. A vast quality of literature has been written on how to do evaluation, but rather little is known on actual evaluation practices in the South. This paper tries to respond to this gap by presenting a set of articles on evaluation practice from Africa, Asia and Latin America in agricultural research and development organisations.

Eight common themes emerge from the papers presented. Not surprisingly, 'Evaluation means many different things to different people' (stakeholder, programme managers and evaluators may have entirely different perceptions) and very often 'Too much may be expected of an evaluation'. Another common view developed in the papers is that 'Evaluation can be most useful when it is developed as an institutional process'. Episodic evaluations disconnected from institutional planning and management processes are of limited use. That 'Academic traditions and disciplinary perspectives influence perceptions of how evaluation should be done', is not new but worth keeping in mind when recruiting or working with a multi-disciplinary team. 'Evaluation practice lags far behind methodology development': sophisticated evaluation technologies have been developed, but evaluation practice shows that methods used in the field often fall far short of professional standards. A sixth common theme is the so-called 'Impact mania' observed by the contributors. 'Donor fatigue', loss of confidence in development programmes, and downturns in funding over the last years have fuelled demands for impact evidence – something which is most frequently requested by funding agencies, most frequently promised by evaluators and least frequently delivered in evaluation reports. The papers cite two main problems as 'Common barriers to the use of evaluation': the limited resources (including experience) for evaluation and the lack of formal training in evaluation methods. Finally, the papers conclude that 'Opportunities for improvement' are provided, through linking evaluation to planning and programme implementation in order to foster learning and continuous improvement in an organisation's strategy and activities. It is concluded that capacity building is more a process of social experimentation than of social engineering. Management systems cannot be imported, but need to be developed within organisations.

Jenkins, Rob and Anne Marie Goetz (1999) 'Accounts and Accountability: Theoretical Implications of the Right-to-Information Movement in India', *Third World Quarterly* **20(3): 603–22.**

[From article abstract]
The work of a small and unusual activist group in the north Indian state of Rajasthan has raised a series of practical and theoretical issues for promoting accountability more generally. The Mazdoor Kisan Shakti Sangathan (MKSS) – literally: Workers' and Farmers' Power Organisation – has waged a campaign to secure the right of ordinary people to gain access to information held by

government officials. In the process of experimenting with methods of compiling, sharing and verifying expenditure data at very local levels – thus far, in the absence of a statutory entitlement to such information – the MKSS has developed a radical interpretation of the notion that citizens have a right both to know how they are governed and to participate actively in the process of auditing their representatives. This article examines the process by which this campaign emerged and the means by which it pursues its goals. It then analyses the implications of the MKSS experience, and the larger movement it has spawned, for contemporary debates in three areas: human rights, participatory development and, of course, anti-corruption.

Keeble, Sally (2002) 'The Role of Northern Civil Society in International Development', Speech by the Parliamentary Under-Secretary of State for International Development at the BOND Annual General Meeting, 11 July 2002. (available at www.dfid.gov.uk)

Keeble introduced the topic 'the role of Northern civil society in international development' by placing it in the context of the Millennium Development Goals (MDGs). The new focus on poverty eradication and the importance of ownership within international development has, among other things, contributed to more direct engagement between Northern donor agencies and Southern civil society. In addition, there is increasing recognition that there is a real need for credible governments in the South that are supported to provide services to their citizens. However, this does not necessarily mean that Northern NGOs are redundant. Both DFID and UK development NGOs will have to consider what their appropriate role is if progress is to be made towards the MDGs. This role is a changing one, especially for Northern NGOs.

Northern NGOs may be losing their comparative advantage in traditional service delivery work. They may also be losing their privileged position on grassroots information from the South as Southern civil society matures in its own research and policy capacity. In this changing scenario, Northern NGOs do however have a role to play in building the capacity of Southern civil society institutions to engage in decision-making in their own local and national contexts, and in global decision-making processes. This will enable Southern civil society to become more secure in holding policy-makers – both national and international – accountable to their pro-poor objectives. It will strengthen them in their demands for improvements in the provision of basic services from governments. Keeble also notes that Northern NGOs who are engaged in capacity building are shifting away from the narrow focus of technical skills transfer towards a focus on strengthening Southern organisations as a whole, including their staff capacities, organisational culture, processes of planning and strategising, and ability to understand and react to changing contexts.

This changing role for Northern NGOs raises a couple of challenging issues. Firstly, there may be some difficulty in demonstrating the impact of this approach as there is still a strong emphasis on measuring tangible inputs and outputs. Secondly, the increasing complexity of international development processes demands that Northern NGOs should invest in policy analysis of the highest quality. This again requires credible information processes.

KFPE (2001) *Enhancing Research Capacity in Developing and Transition Countries*. Berne: Swiss Commission for Research Partnerships with Developing Countries (KFPE).

This book is an overview of activities related to research for development in several donor agencies, including DANIDA, DFID, the European Commission, NORAD, RAWOO, SDC, Sida, UNESCO and WHO. It was prompted by the acknowledged need for more equitable participation in the generation and application of new knowledge within the development field, and the associated need to promote North–South and South–South research partnerships. At the moment there are large

differences between agencies in terms of their ability to process and use knowledge, and one way of addressing this imbalance is to support relevant institutional capacity building in developing and transition countries.

The book is divided into five sections. The first section contains introductory chapters on the current status and challenges of research capacity in developing and transition countries, and the second and third sections present experiences of development-related research activities from around the globe. Sections four and five comprise chapters and detailed overviews from donor agencies describing their activities to strengthen research capacity.

King, Kenneth (2001) '"Knowledge Agencies": Making the Globalisation of Development Knowledge Work for the World's Poor?', *Learning to Make Policy Working Paper* **9. Edinburgh: Centre of African Studies, University of Edinburgh. (available at www.ed.ac.uk/centas/fgpapers.html)**

[From CAS website, www.ed.ac.uk/centas/futgov-home.html]
Do trends towards knowledge-based aid and the globalisation of knowledge benefit the North more than the South? Knowledge-based aid has grown dramatically in emphasis within agencies in the last five years. There is still a lack of evidence on the impact of these knowledge strategies but there are grounds for concern and possibilities for alternative approaches. These include:

- Knowledge-based aid must be located in its context. This includes globalisation, the internationalisation of the trade in educational services, the aggressive marketing of Northern higher education, the continuing challenges to research in the South, and the continuing reduction in overall aid to the South.

- Rather than starting with the dramatic Southern knowledge deficits or the key question of how knowledge management could assist knowledge development in the South, agencies have focused on their own knowledge needs. This has occurred because agencies have been seen as being no different from large corporations.

- Agencies who build on the corporation model are likely to become more certain of what they themselves have learnt, and more enthusiastic that others should share these insights.

- Instead, there is a need to ask how joint involvement in agency knowledge projects could better build knowledge in the South. To do this effectively, it would be essential to have a much more elaborate account of Southern knowledge bases and knowledge systems.

- Nonetheless, the value of the new knowledge management and knowledge sharing concerns is that they require organisations to rethink their working assumptions about North–South networking, North–South partnership, and North–South knowledge solidarity.

Korten, David (1984) 'Rural Development Programming: The Learning Process Approach' in David Korten and Rudi Klauss (eds) *People-Centered Development: Contributions toward Theory and Planning Frameworks.* **West Hartford, CT, USA: Kumarian Press.**

Korten maps out several important concerns related to learning processes in development projects. He distinguishes between 'blueprint' and 'process' project models, and argues that in development it is far better to work towards a process approach than a blueprint approach. The reason for this is that development projects nearly always operate with limited knowledge, in environments that are constantly changing. Therefore it is futile to adopt a blueprint model which forces one to behave as if one had perfect knowledge in a perfectly stable setting.

Korten further argues that 'Any pre-planned intervention into a varied and constantly changing socio-technical system inevitably will be in error by some margin... It is the response to this error that tells the true character of the organisation' (p. 184). He outlines three different responses to error that might be used by a development organisation (see Table 3 below). In conclusion, Korten suggests that a learning process in a development agency works best when it integrates the three areas of action-taking, knowledge-creation, and institution-building.

Table 3 Organisational responses to error

i. Self-deceiving response	ii. Defeated response	iii. Learning response
Error = A failure	Error = A force beyond control	Error = A source of information
Strategy: The error is hidden and/or someone is left with all the blame.	Strategy: The error is talked about in rich detail but no action is taken.	Strategy: The error is discussed candidly and corrective actions are attempted.
The leadership is (partially) deceived and thinks everything is going exactly to plan.	The leadership is left impotent and the organisation becomes immobilised.	The leadership is able to continuously draw on lessons learnt.

Source: adapted from Korten (1984: 184)

Levitt, Barbara and James G. March (1988) 'Organizational Learning' *Annual Review of Sociology* **14: 319–40.**

Levitt and March's oft-quoted article highlights the limitations and ambivalence of organisational learning. They suggest that the limitations stem from three sources:

1. The amount and *complexity of experience* within an organisation; the more complex the experiences, the more difficult it is to draw lessons from them.

2. *Human habits*: there are limits to the rationality of human behaviour within organisations.

3. *Features of the organisation* may hinder learning, such as hierarchical structures and routines.

Levitt and March continue by discussing the issue of 'routines' in more depth. They argue that routines are not necessarily limiting. Routinisation can lead to a progressive reduction of errors as people become used to repeating the same practices. However, routines become limiting when they lead to a large investment in learning within one bounded set of practices, and hinder learning outside this set framework. One example is the investment in learning the QWERTY keyboard, which meant that the QWERTY design was carried over from typewriters to computers.

The authors also discuss issues related to 'sub-groups' within an organisation. Different sub-groups can have different targets and means of evaluation, which easily causes friction with other sub-groups. The different interpretations used by different groups may facilitate learning within the group, while potentially hindering learning at an organisation-wide level.

Lipsky, Michael (1980) *Street-level Bureaucracy: Dilemmas of the Individual in Public Services.* **New York: Russell Sage Foundation.**

Lipsky examines what happens at the point where policy is translated into practice, in various human service bureaucracies such as schools, courts and welfare agencies. He argues that in the end policy implementation comes down to the people who actually implement it (e.g. teachers, lawyers, social workers). They are the 'street-level bureaucrats', and they exercise a large amount of

influence over how public policy is actually carried out. Lipsky suggests that they too should be seen as part of the policy-making community.

He discusses several pressures that determine the way in which street-level bureaucrats implement policies. These include the problem of limited resources, the continuous negotiation that is necessary in order to make it seem like one is meeting targets, and the relations with (nonvoluntary) clients. Some of the patterns of practice that street-level bureaucrats adopt in order to cope with these pressures are different ways of rationing the services, and ways of 'processing' clients in a manageable manner.

Lipsky concludes that potentially there are means of changing street-level bureaucracies to become more accountable to 'clients' and less stressful for the 'bureaucrats'. One of the ways of doing this, he suggests, is to move research from the ivory tower and onto the street, for example through conducting research while running a social work centre at the same time.

Lloyd-Laney, Megan (2003) *Advocacy Impact Assessment Guidelines*. Wallingford, Oxon: Communications and Information Management Resource Centre (CIMRC). (available at http://www.cimrc.info)

[From CIMRC website, www.cimrc.info]
DFID's major advocacy activities focus on influencing agencies and governments to invest in infrastructure. However, it is hard to find concrete evidence of the contributions that advocacy makes towards poverty eradication. This paper provides guidelines for an approach that many NGOs take to assess advocacy impacts. Being clear about the changes you want to effect means that you can develop measurable advocacy objectives. Designing indicators that act as milestones towards the achievement of objectives provides a basis in the search for evidence. There are different types of advocacy impacts, known as different dimensions of change, and some indicators are described for the following dimensions: changes in policies and their implementation, private sector change, strengthening civil society, aiding democracy and improving the material situation of individuals.

Participatory monitoring and evaluation asks the people being affected by a project whether it has made a difference. However, this is often more complex than standard evaluation systems and it is necessary to be clear about the goals of the process and who should be involved. In order to assess impact, it is necessary to know the existing situation prior to advocacy. This can be determined by identifying the targets of Awareness, Knowledge, Attitudes and Behaviour (AKAB) on your issue, and progress can then be monitored by AKAB re-evaluation. Once the information is obtained, it needs to be analysed. Lessons can then be learned and evaluation results used to demonstrate that advocacy works.

Madon, Shirin (2000) 'International NGOs: Networking, information flows and learning' *Development Informatics Working Paper Series* 8. Manchester: Institute of Development Policy and Management, University of Manchester. (available at http://idpm.man.ac.uk/ wp/di/index.html)

[From www.id21.org]
How can international NGOs (INGOs) use networking, learning and information systems to increase their development impact? What is the state of their systems for accessing and processing information? How could they become more successful in sharing and learning information? In research by the London School of Economics and Political Science and the Institute for

Development Policy and Management it is argued that learning from the field is essential to enable INGOs to influence wider policy-making and improve local accountability. The research paper urges radical change in the way INGOs receive and manage information.

For learning systems to become institutionalised, INGOs need appropriate institutional structures, information exchange processes and skills in generalising from the field. With an emphasis on decentralised structures, non-hierarchical communication and openness to learning, INGOs have the potential to remain flexible in responding to changing circumstances and to devise solutions to complex development challenges.

Research findings include:

- Most INGOs' systems for accessing, storing, transferring and disseminating information are underdeveloped and many suffer from information overload, receiving huge amounts of information which they are unable to process.

- Organisational learning often focuses on internal processes, neglecting the essential contribution of external information from interaction with other organisations, for example, partners, development agencies and academics.

- The balance between participatory, field-based learning and learning that feeds into wider policy and advocacy-related work is essential, but difficult to maintain.

- The channelling of information from the field for headquarters' consumption is being replaced by the acceptance of the use of locally-generated information and communication channels for learning.

- Field experiences need to be generalised to have influence in wider policy circles.

Policy implications include:

- The crucial aspect of information sharing and learning is not the information itself but the building of learning capacities.

- Direct, experiential learning amongst field workers remains the foundation for other forms of learning linked to good practice, policy and advocacy work.

- Encouraging action, reflection and learning from experience among field staff and project partners must take top priority.

- Learning needs to be supported by decentralised, flexible institutional structures that are open to experimenting with indigenous forms of information and communication channels.

- More emphasis should be placed on the documentation and dissemination of indigenous, local experience.

Malhotra, Yogesh (2001) 'Organizational controls as enablers and constraints in successful knowledge management systems implementation' in Yogesh Malhotra (ed.) *Knowledge Management and Business Model Innovation*. Hershey, PA, USA: Idea Group Publishing. (available at www.kmnetwork.com)

In this chapter, Malhotra discusses the role of organisational controls and procedures in relation to knowledge management, and raises the question of whether organisational controls enable knowledge sharing and knowledge generation, or whether they constrain them. His main argument is that 'knowledge management' is seen too often as a way to control the knowledge sharing behaviour of the organisation's staff, and that when this happens, effective knowledge management is severely constrained. Constraining knowledge procedures are usually presented with pre-decided

goals, blueprint recipes for achieving these goals, and recipe guidelines for employees to follow. Such procedures tend to reinforce organisational stability.

Malhotra suggests that the most successful knowledge management systems are those that encourage the autonomy and self-control of organisation members, instead of attempting to impose procedures that aim to modify or constrain their behaviour. He argues that knowledge management procedures need to be designed along the principles of 'semi-confusing information systems' which attempt to draw not only on past experiences, but also on expectations of future experiences. This approach takes into account the fact that knowledge in an organisation is not fixed but is continuously changing, and therefore past experiences are not always a reliable guide to how to plan for future experiences. Staff become more able to deal with ongoing changes when they are allowed room to act on incomplete information, trust their own judgements, and take decisive action to capture increasingly shorter windows of opportunity.

March, James G. (1991) 'Exploration and exploitation in organizational learning' *Organization Science* **2(1): 71–87.**

March is less optimistic about the possibilities of organisational learning than his colleagues in the field of corporate knowledge management, such as Senge and Argyris. March tends to emphasise the limited and ambivalent nature of learning, and challenges the allegedly simple learning guidelines that many other authors espouse.

In this article he maps out the distinction between 'exploitation' strategies which involve the use of past knowledge, and 'exploration' strategies which aim to develop new knowledge. Any organisation must choose how to balance the need for exploitation versus the need for exploration. For example, a routine-based work environment will have more need for exploitation strategies to capture the best routines, while a research institute will have more need for exploration strategies to remain innovative and ahead of competitors. March cautions that those organisations that have a relatively higher need for exploration strategies also face a far more uncertain environment:

> 'Compared to returns from exploitation, returns from exploration are systematically less certain, more remote in time, and more organizationally distant from the locus of action and adaptation.'
> (p. 73)

March argues that organisations will become increasingly more adept at developing exploitation strategies as their understanding of the surrounding environment improves. Organisations need to understand the changing nature of their environment, along with the direction and rate of the change.

Marchand, Donald (1998) 'Competing with Intellectual Capital' in Georg von Krogh, Johan Roos and Dirk Kleine (eds) *Knowing in Firms: Understanding, Managing and Measuring Knowledge.* **London: Sage.**

Marchand aims to present a framework for the interaction of knowledge and information, and then to demonstrate the business value of this linkage. He does this through discussing the way in which one large company, Skandia, has managed to link their business strategy and performance with measurements of their 'intellectual capital'. According to Marchand, it is crucial to understand the relationship between knowledge and information. While knowledge is personal and resides in people, information is embodied in written documents and verbal messages. Information always encompasses an act of transfer between people. It is through information that we develop new

knowledge. Once this relationship between knowledge and information has been established, Marchand goes on to suggest that the processes of conversion from information to knowledge and vice versa ought to be a key part of any business strategy.

This is illustrated by the case of Skandia, whose intellectual capital depends on continuous conversion of knowledge and information among suppliers, employees and customers. In turn, personal knowledge is converted into 'structural capital', i.e. ways of storing information to make it accessible to employees in the future. This is achieved through, for example, making Skandia's intellectual capital visible in their accounting system. Five focus areas for intellectual capital were identified – financial, customer, process, renewal and development, and human – and in each of these areas, indicators of performance are translated into metric numbers. These are referred to as intellectual capital indicators, and are managed by Skandia's director of intellectual capital. Marchand concludes:

> 'Companies such as Skandia AFS represent a new breed whose business strategy and approach to customers and markets require excellence in growing and deploying knowledge and information more effectively and quickly than their competitors.' (p. 267)

Marsden, David, Peter Oakley and Brian Pratt (1994) 'Measuring the Process: Guidelines for Evaluating Social Development', *NGO Management and Policy Series* **3. Oxford: International NGO Training and Research Centre.**

Marsden and Oakley have edited two books on social development evaluation, based on two conferences on this theme organised by INTRAC in 1989 and 1992. The participants, over 100 in all, came from a wide range of NGOs, both Northern and Southern, as well as donor institutions. Marsden and Oakley synthesised the significant themes addressed at the conferences, and their second book, 'Measuring the Process' (written together with Pratt), sums up the most important issues and the learning that had occurred throughout the process.

The book is intended primarily as a practical guide for undertaking the evaluation of social development projects. A literature review is included, as well as three in-depth case studies of evaluations from Colombia, India and Zimbabwe. One of their conclusions emphasises the plurality of evaluation methods that exist, and the authors remain largely tolerant of this diversity, suggesting that practitioners should cultivate multiple skills. Another conclusion relates to the idea that reality is socially constructed. The implication of this is that evaluation teams should carefully consider the assumptions that underlie their own views of reality and thus the methods they choose to use. A final highlighted theme is participation. The book suggests that learning processes should involve all relevant stakeholders and that the end results should be negotiated in an egalitarian fashion between them. In summary, as the book is based on contributions from conferences it does not present a significantly new framework for understanding the issues, but rather serves as a forum to raise questions that preoccupy NGO practitioners trying to find ways of evaluating their own practice.

Maxwell, Simon (2002) 'Development Research in Europe: Towards an (AII) Star Alliance?', *EADI Newsletter* **3–2002. Bonn, Germany: European Association of Development Research and Training Institutes.**

The starting point for this brief paper is the observation that the 'business environment' of development research and training institutes in Europe is rapidly changing, in five distinct ways in particular:

1. Research capacity in developing countries is growing, and European institutes are increasingly looking to collaborate with Southern research units.

2. The untying of aid will force European research centres to compete for funding on an international – rather than simply national – basis.

3. Networks – such as the Global Development Network (GDN) – are becoming more important for development research, serving both to link researchers from different localities and to promote global research programmes.

4. Development research is facing growing demands for policy relevance and impact. This raises the important question of whether individual research units can hope to influence international development policy if they continue working independently of each other.

5. Following the European Union enlargement, development cooperation across the EU and reflections on the role of Europe on the international stage will also affect European development research.

When considering how best to deal with these challenges, European research institutes face three options. Maxwell describes them as follows:

- The Microsoft option: a hegemonic European research organisation with common standards.

- The MacDonalds option: a number of outlets that are independently owned but work with common products and under the same banner.

- The Airline Alliance model: a relationship of 'collaborative competition'. In this model, firms retain their own identity and right to make decisions, but have invested in processes that allow them to collaborate on such operational issues as design and marketing.

The Microsoft and MacDonalds options both seem too homogenous to accommodate the diversity and contextual nature of much of the work carried out by development research centres. However, the Airline Alliance model may prove to be a viable way forward. Maxwell suggests that EADI could take the first steps towards this by actively brokering partnerships between its member institutions. If research units aim to find policy problems of common interest and then collaborate on relevant research programmes, the research findings and policy recommendations would both be more widely disseminated and carry greater authority.

McElroy, Mark (2000) 'Second-Generation KM: A White Paper' *Knowledge Management* **4(3).**

According to McElroy, head of Macroinnovations, KM strategies can be divided into two 'generations'. The 'first generation' of KM strategies focused on addressing the problem of inadequate knowledge sharing. The approach taken to address this problem was heavily supply-side driven, and frequently involved implementing technical solutions such as data warehousing, document management or codification of existing knowledge. The 'second generation' of KM strategies have tried to move beyond this technical approach and towards more process-oriented and demand-side driven initiatives. This requires moving beyond codification of existing knowledge to strategies designed to facilitate the creation of new knowledge. An environment that stimulates creativity is vital. McElroy gives the following advice to agencies wishing to implement successful KM and learning strategies:

> 'Feed the processes that spawn the production and integration of new knowledge in human affairs, and innovation and better organizational performance will follow.'

Table 4 The two generations of KM strategies

	First generation KM	Second generation KM
Aim	Knowledge sharing	Knowledge innovation
Content	Existing knowledge	New knowledge
Tools	Technical (codification, collections)	Process-oriented (human connections)
Motivation	Supply-driven	Demand-driven
Focus	Improved streamlining	Enhancing conditions for creativity
Benefit to organisation	More efficient coordination	Continuous organisational learning

Source: adapted from McElroy (2000)

McGann, James (2002) 'Think-tanks and the transnationalization of foreign policy' *US Foreign Policy Agenda* **7(3). (available at http://usinfo.state.gov/journals/itps/1102/ijpe/ pj73mcgann.htm)**

James McGann is President of McGann Associates, and a Senior Fellow at the Foreign Policy Research Institute in Philadelphia, Pennsylvania, where he directs the Think-tanks and Civil Societies Programme. In this critical reflection on the role of think-tanks in today's changing transnational policy context, he begins with an analysis of the effects of globalisation:

> 'The promise and peril of globalization has transformed how we view international relations and opened the policy-making process to a new set of actors, agendas, and outcomes. International relations was once the exclusive domain of diplomats, bureaucrats, and states, but today's policy-makers must consider a diverse set of international actors when formulating foreign policy that includes organizations such as CNN, al-Jazeera, the International Campaign to Ban Landmines, Greepeace, Deutsche Bank, al-Qaeda, the Association of Southeast Asian Nations (ASEAN), and the Organization of Petroleum Exporting Countries (OPEC).'

In this policy environment, characterised by increasing interconnections and information flows, think-tanks can fill an important niche. Not only do they provide specialised information and advice on national and international issues, but they also have the possibility of criticising current policies and speaking 'truth to power'. The means by which they communicate their information and advice is key. As McGann points out, 'information no longer translates into power unless it is in the right form at the right time.'

This provides think-tanks with a set of distinct advantages. They are often:
- able to carry out future-oriented research that addresses cross-cutting and emerging themes;
- able to generate reconfigured policy agendas, rather than following routine procedures;
- able to facilitate collaboration across a wide range of groups, including different groups of researchers, media, civil society organisations and policy-makers.

Think-tanks that build on their potential in this regard have an important role to play in sustaining democratic governments and supporting civil society around the world.

Mehta, Lyla (2001) 'The World Bank and its Emerging Knowledge Empire' *Human Organization* **60(2): 189–96.**

[Partly from the abstract]
This paper critically examines the emerging knowledge agenda at the World Bank. From the publication of the World Development Report 1998/99 on 'Knowledge for Development' to present

discussions around the Global Development Gateway, the World Bank is attempting to carve out a niche for itself as the 'Knowledge Bank'. In so doing it appears to have shifted from merely focussing on the transfer of capital. Instead, it seeks to be a leading player in development expertise and knowledge transfers in international development. The paper examines the Bank's conception of knowledge, the rise of knowledge enterprises at the Bank and the various tensions in its knowledge discourses. Mehta argues that the Bank's knowledge agenda often tends to be centralised and absolutist, and draws on economistic and technocratic models. These trends contribute to the emergence of a narrow knowledge agenda which both neglects socio-cultural issues and those concerning a wider political economy. Thus, the plural nature of knowledge is denied and the Bank's own problematic role in knowledge generation is not reflected upon.

In the World Development Report, 'imperfect information' is viewed as a hindrance to development. However, this quickly becomes too simplistic when the multi-faceted nature of knowledge is not taken into account. For example, the Report argues that millions of children die of diarrhoea because their parents do not have the information on how to treat them. This view ignores the fact that the spread of diarrhoea is closely linked to sanitation, overcrowding, nutrition, and poverty – and cannot simply be solved through providing information.

Mosse, David (2002) 'The Western India Rainfed Farming Project: Seminar and Discussion', *PARC Document* 8, presented at a DFID learning organisation seminar, 5 July 2002. Birmingham: Performance Assessment Resource Centre, International Organisation Development Ltd. (available at www.livelihoods.org/post/Docs/WIRFP.doc)

At a workshop framed by the question of how DFID could become a 'learning organisation', Mosse presented a case study of a DFID rural development project in Western India ('the Kribhco project'). The questions guiding the paper concerned the relationship between policy and practice in this project, and the author put forward five propositions:

1. *Policy (development models etc.) functions to legitimise interventions, and win and maintain political support*. The Kribhco project presented a coherent policy argument centred on the aim of poverty-focused participatory development, which spoke powerfully to emerging DFID (then ODA) policy concerns in the early 1990s. In a way, one might say that the project used participation as a marketing strategy or as a commodity in its own right. The policy of participation functioned as a means to 'sell' the project and 'buy' funding.

2. *Development interventions are not driven by policy, but by the institutional and political exigencies of implementing agencies; donor policy only comes into effect through the interests of other agencies*. In many ways, the theory and policy of participation did not have any direct effect on the practices of the Kribhco project. For example, participatory planning processes were controlled by powerful groups in the local context, excluding women and other marginal actors.

3. *Projects have to work to maintain themselves as coherent policy ideas (as systems of representations) as well as to undertake development works (as operational systems)*. Despite the gap between policy and practice, the project was largely considered a success by donors and consultants in the mid-1990s. The assessment of success was based on two separate and contradictory systems within the project: on the one hand, the representational system of participatory theory was well maintained and presented, and on the other hand, an operational system of vertical programme delivery (in many ways contradictory to the ideal of democratic participation) worked effectively and produced development outputs.

4. *Projects do not fail, they are failed (by policy and wider networks of support/validation)*. After the period of success, the Kribhco project began to be challenged by reviewers advocating a new turn in DFID thinking. Even though impact assessment studies found that villagers

perceived the project as having a significant positive social and economic impact, the project was asked to redefine its model. Around 1998, the project policy was brought into line with new ideas on rural livelihoods. There was assumed to be a relationship between this project policy and livelihood impacts, but the nature of the relationship was never clarified.

5. *'Success' and 'failure' are policy-oriented judgements that obscure project workings and effects*. In the end the Kribhco project 'failed' based on an evaluation of its policy model. The assessment seems to have been overly deductive (i.e. asking questions about whether it is happening as was wanted) and insufficiently inductive (i.e. asking questions about what is happening).

Mosse concluded that relatively rapid policy changes can lead to a situation where development agencies and projects are forced into a reactive mode, focusing more on their systems of representation than on their systems of operation. In other words, if donors evaluate the failure and success of projects based on the degree of resemblance to their policy models, then organisations are likely to become adept at upward-oriented presentations of correct models to donors, while paying less attention to downward-oriented practices that will reduce poverty.

Mosse, David, John Farrington and Alan Rew (eds) (1998) *Development as Process: Concepts and Methods for Working with Complexity.* **London: Overseas Development Institute and Routledge.**

[Partly from the introduction]
How can the complexity and unpredictability of planned development be understood? How can project managers deal with the social relationships and institutional contexts in which they operate? Linking practical experience and contemporary social theory, this book offers alternative ways of thinking about 'development as process' and new methods for field research and programme monitoring. Conventionally, the complexity of development work has been 'managed' through the use of simple project models in which planned inputs lead logically to predictable outputs. In focusing on the unintended outcome, the unmanageable element, the local variability of effects, and the importance of social relationships, the contributors in this book challenge simplistic managerial models, and suggest new approaches and methods which acknowledge, explore and positively engage with the unexpected and with diversity in the development process. Drawing on work in agriculture, irrigation, forestry and fisheries in countries in Asia and the former Soviet Union, this book examines changing information needs faced by development agencies as they shift from simple technology-led project approaches, towards an emphasis on policy change, institutional reform and inter-agency partnerships. In looking critically at the politics of information production and use in different cultural and institutional settings, the book goes beyond method and technique, and proposes a new look at the role of monitoring information in planned development.

The book suggests that there is a need for new monitoring and evaluation criteria, which take into account intangible 'outputs' such as policy impact and institutional change. This is only possible when an organisation can draw on rapid information feedback and new forms of information generated through practice. The process methodologies presented in the book emphasise the importance of monitoring programmes as they occur, and feeding back information which can help researchers, policy-makers and other partners respond to what is happening. Organisational strategies should be flexible enough to change as a result of learning and information feedback. In other words, information feedback is not only a means to record outcomes, but is also a means to actively produce outcomes.

The book also argues that it is necessary to pay more attention to the importance of relationships within a development project or within an organisation. Relationships have a significant effect on the nature and quality of information feedback. Frequently, information boundaries are deliberately and carefully maintained within an organisation, and the exchange or provision of information is associated with power distribution within the organisation. Some aspects of this depend on the organisation's incentive structures.

Moussa, Antoun and Robert Schware (1992) 'Informatics in Africa: Lessons from World Bank Experience', *World Development* **20(12): 1737–52.**

The World Bank has become more and more involved in information technology (IT) lending in Africa. The authors mention that in fiscal 1990, 90% of all Bank lending operations in Africa had significant IT components – such as operations in information and statistical services, and telecommunications infrastructure. In this article, Moussa and Schware present the findings, interpretations and conclusions of a study by the World Bank's Development Informatics Unit that reviewed 76 World Bank projects in Africa, with the aim of evaluating the returns of the use of IT. In brief, the study shows that the returns are mixed. The dominant users of IT in Africa are governmental agencies, which frequently have limited absorptive capacity when it comes to taking new technology into use. The main constraints are linked to limited human and organisational capabilities. In particular, the following core factors are highlighted:

- Institutional weaknesses, including inadequate planning processes;
- Weak human resources base to draw on;
- Funding shortages;
- Environmental difficulties, including insufficient physical facilities.

The convergence of these factors creates a challenging situation for IT projects. The difficulties are amplified by the increasingly ambitious scale of the projects themselves. The authors conclude that the implementation of IT in Africa demands far more intensive planning than it has received, in order to take into account the constraints to absorptive capacity and sustainability.

Nicholson, Trish (1994) 'Institution building: Examining the fit between bureaucracies and indigenous systems' in Susan Wright (ed.) *Anthropology of Organizations*. **London: Routledge.**

Nicholson introduces this paper by pointing out that evaluations of development projects frequently cite institutional weaknesses within developing countries as one of the main causes of poor performance. The solution is often seen to be local institutional development – including capacity building, better learning systems, information systems, and knowledge management systems in local institutions. Nicholson argues that local institutional development has tended to rely on implementation of Western organisational models, including the implementation of 'Western' values (which perhaps over-emphasise rationality and formality) and colonial bureaucratic structures. This type of blueprint institutional development has largely ignored local cultural concepts, such as kinship loyalty and obligations, and the way local institutions would usually be built by taking into account these cultural concepts.

This is illustrated by an example of the tradition of '*wantokism*' in Papua New Guinea. Wantoks are semi-formal groups which are used to define membership to a certain social group. At the same time, wantoks function as important bases for decision-making, diplomatically correct communication, and resource distribution. In this context, Nicholson argues that awareness of the

effects of wantokism has to be an important factor to take into account when designing appropriate local management systems in Papua New Guinea. She also suggests that the tendency to ignore local concepts and processes has impeded organisational knowledge development and innovation: 'By paying insufficient attention to the cultural context in which institutions operate, the opportunity to be truly innovative has been lost' (p. 69).

Nonaka, Ikujiro (1995) *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. **New York and Oxford: Oxford University Press.**

Nonaka, a leading Japanese business expert, has become widely known in the West due to his analysis of knowledge creating strategies. Nonaka argues that the competitive advantage of Japanese firms is based on the interaction of four modes of knowledge creation: 'socialisation' (from tacit to tacit knowledge), 'externalisation' (from tacit to explicit), 'combination' (from explicit to explicit), and 'internalisation' (from explicit to tacit). He has developed seven guidelines for organisations wishing to adopt the knowledge-creating model:

1. *Create a knowledge vision*: In the near future, top management will be evaluated not only by economic performance but also by the quality of their knowledge vision and their ability to communicate it within the organisation. A knowledge vision should be clear enough to provide direction for staff in terms of the types of knowledge they should be developing. At the same time it should be open enough for staff to interpret it to fit with their working environment.

2. *Develop a knowledge crew*: The organisation cannot create knowledge except through its individual employees. Therefore, a knowledge creating organisation needs to foster a diverse range of talents.

3. *Build a high-density field of interaction at the front line*: A high-density field refers to an environment in which there is frequent and intense interaction between staff members. Facilitating environments can be built through physical layout (e.g. open-plan offices), regular events (e.g. weekly update meetings), or organisational structure (e.g. cross-functional or new-product teams).

4. *Piggyback on the new-product development process*: Nonaka argues that 'how well a company manages the new-product development process becomes the critical determinant of how successfully organisational knowledge creation can be carried out' (p. 231). New-product development can be improved by maintaining a flexible organisational approach to trial and error.

5. *Adopt middle-up-down management*: While top management of an organisation outline a vision of 'what ought to be', front line staff experience 'what really is'. Nonaka suggests that the tension between vision and reality can be narrowed by middle managers, whose job should be to make explicit the tacit knowledge of both top management and front line staff and mediating between the two. This recommendation is unusual in the West, where middle managers are more frequently seen as a dying breed.

6. *Switch to a hypertext organisation*: A hypertext organisational structure refers to a structure that combines the efficiency of a hierarchy/bureaucracy with the flexibility of a task force. These two modes of operating are seen as complementary rather than mutually exclusive.

7. *Construct a knowledge network with the outside world*: One of the most difficult tasks of an organisation is to tap into and mobilise the tacit knowledge held by its outside stakeholders. Stakeholders have needs, demands and valuable knowledge, but frequently do not explicitly articulate this. This means that the organisation has to actively seek out stakeholders and elicit information from them in the most appropriate way.

Nuijten, Monique (1992) 'Local organization as organizing practices: Rethinking rural institutions' in Norman Long and Ann Long (eds) *Battlefields of Knowledge.* **London: Routledge.**

Nuijten argues that institutional development cannot be based on a universal blueprint. Instead, local institutional development must always be seen in the local context. Her paper is based on an examination of local land tenure institutions (*ejidos*) in rural Mexico. She compares the local *ejidos* to the formal types of organisations that development projects would like to implement. The comparison shows that local institutional development projects are overly based on ingrained notions of Weberian formal bureaucratic rationality. If these Western forms of organisation are implemented in this rural area, the formal organisational processes are bound to be used in different and unexpected ways by rural people. In order to strengthen institutional processes that will be used effectively by people, it is necessary to understand local concepts of institutions and management practices, as well as local disputes and alliances, and the way this (often silent) local knowledge shapes the institutions in question.

Nutley, Sandra, Isabel Walter and Huw Davies (2002) 'From Knowing to Doing: A framework for understanding the evidence-into-practice agenda', *Discussion Paper* **1. St Andrews, UK: Research Unit for Research Utilisation, University of St Andrews. (available at http://www.st-and.ac.uk/~cppm/ under RURU)**

This overview paper aims to map out the terrain of research utilisation and evidence-based practice (RU/EBP) through examining six inter-related areas:

1. *Types of knowledge*. RU/EBP does not just require know-how, but also know-who and know-why. This type of knowledge is often based on more tacit understanding – such as 'craft expertise' – rather than explicitly systematic investigation.

2. *Types of research utilisation*. It is emphasised that research may be used in different ways, ranging from instrumental use that results in practical/behavioural change, to conceptual use that results in changes in understanding and attitude. Conceptual change is perhaps the most important impact that research can have long-term.

3. *Models of the process of utilisation*. The shift from a linear model of research/policy linkages ('research into practice') to a multi-dimensional model ('research in practice') is echoed in the shift from 'researcher as disseminator' to 'practitioner as learner'.

4. *Conceptual frameworks*. Different conceptual frameworks are often used implicitly to frame the RU/EBP problem in a specific way. The paper briefly outlines six possible conceptual frameworks: diffusion of innovations; institutional theory; managing change in organisations; knowledge management; individual learning; and organisational learning.

5. *Main ways of intervening to increase evidence uptake*. Broad-based approaches to securing long-term change face three key challenges: cultural challenges when dealing with multiple cultures; logistical challenges arising from difficulties with information systems and access to resources; and contextual challenges linked to differences in learning among different groups.

6. *Different ways of conceptualising what RU/EBP means in practice*. Four different 'types' or dimensions are suggested: (i) the evidence-based problem solver, who has an individual and day-by-day, case-by-case focus; (ii) the reflective practitioner, who uses observational data to learn from the past and adjust for the future; (iii) system redesign, which emphasises the importance of reshaping total systems, often in a centrally driven way; and (iv) system adjustment, which refers to system level 'single-loop' learning.

O'Malley, Dolores and Geoff O'Donoghue (2001) *NGOs and the Learning Organisation.* **London: British Overseas NGOs for Development. (available at www.bond.org.uk/lte/ lngo.htm)**

In this scoping paper on learning in NGOs, commissioned by BOND, O'Malley and O'Donoghue outline their definition of a learning organisation and ways of becoming a learning organisation. They suggest that a learning organisation is characterised by:

- an acceptance of mistakes as valuable for learning;
- a growing sense of responsibility, both personal and collective;
- participative processes within a climate of exploration and respect;
- empowerment of the organisation's members to analyse problems, identify solutions and develop responses.

Their discussion of empowerment also emphasises that empowerment is achieved 'by people developing their own solutions rather than having them imposed or imported from outside'. They note that the need to develop new solutions in NGOs is not always experienced as empowering, but may instead lead to 'change fatigue'. Change fatigue in an NGO is somewhat of a paradox: while NGOs continually try to foster change in the areas where they work, they often struggle with having to cope with change in their own organisations.

The authors draw much of their material from Senge's *Fifth Discipline*, in which he argues that a learning organisation fosters five 'disciplines': personal mastery; mental models; shared vision; team learning; and systems thinking. The most important of these is the fifth discipline, systems thinking, which encourages all members of an organisation to incorporate a systemic view into everything they do – i.e. to reflect on how their knowledge and actions interact with other activities in the organisation.

Finally, the authors review further challenges for learning organisations. The challenges they focus on include the necessity for learning organisations to undertake the following shifts:

- Shift from a mechanistic approach to also include an organic/systemic approach;
- Shift from 'step' thinking to also include 'web' thinking;
- Shift from an emphasis on teaching to also include learning.

Pasteur, Kath and Patta Scott Villiers (2003) 'Minding the Gap through Organisational Learning' in L. Groves and R. Hinton (eds) *Inclusive Aid: Changing Power and Relationships in International Development.* **London: Earthscan.**

Drawing on case studies from DFID and Sida, the authors suggest that there is a gap between the rhetoric of development (e.g. the rhetoric of 'participation' and 'ownership') and what is actually happening in practice. They argue that this gap can be bridged through organisational learning, more specifically through members of the organisation taking time to reflect on personal and systemic practices. People who are able to reflect on their own attitudes, values, goals and behaviours will be able to form new types of relationship and learn in new ways. The authors include a typical quote from a member of staff in a donor agency to illustrate the need for time to reflect: 'I have a sense of not taking time to reflect on why it didn't work. Instead we just throw it out and do something new.' The lack of time and space to reflect is a recurring refrain in development agencies. Practicalities, including meetings and reports, take up a large part of the day, and there is usually no incentive attached to setting off time simply to think.

However, when members of staff do manage to prioritise time for reflection, the authors argue that significant changes are brought about in the organisation. They outline a learning project in the Swedish bilateral agency Sida, in which small groups of staff came together over a period of eight months, to learn from each other, deepen their understanding of important development themes, and reflect on their own work practices. They were both looking within themselves, and looking beyond to understand their work environment. The result was that the staff members said they felt that they would go about their work in a subtly different way after participating in these reflection groups. They also reported that as a result of the groups they would be more willing to seek different opinions before taking decisions. The authors suggest that this is a sign of a new attitude to learning, termed 'double loop learning', so called because it affects the underlying variables that govern work strategies, as opposed to 'single loop learning' which only affects the work strategies themselves while leaving the underlying variables in place.

Powell, Mike (2003) 'Information management for development organisations', 2nd edition, *Oxfam Development Guidelines Series*. Oxford: Oxfam.

[From Oxfam's website, www.oxfam.org.uk]
Oxfam has recently issued a second edition of their Guidelines for information management, aimed at Oxfam staff, partners and other interested development organisations. The Guidelines suggest that if information flows well between and within organisations, it empowers people by enabling them to make evidence-based choices; it promotes efficiency; and it enables creativity. Information does not flow well by chance: the process needs to be managed by everyone concerned. This book introduces tools to analyse how information is used in an organisation and discusses both strategic and practical options for improvements, in the context of the broader information-related changes and debates currently taking place in the world. This edition covers the major developments in these external debates. Discussions of knowledge management, capacity building, institutional learning, evaluation and impact assessment, research, information products and evidence-based work have been added, together with a number of case studies.

Roche, Chris (1998) 'Organizational assessment and institutional footprints' in Alan Thomas, Joanna Chataway and Marc Wuyts (eds) *Finding out Fast: Investigative Skills for Policy and Development*. London: Sage and the Open University.

Roche sets out to show how one might 'find out fast' about an organisation in either the public, private or not-for-profit sector. He suggests a number of different approaches that complement each other:

- *Stakeholder analysis* to map out the owner, financier, users, regulator, political superior, mafia, staff and local communities that have a stake in the particular organisation.
- *A 'gender archaeology'*, i.e. an assessment of whether and how institutional structures and practices promote certain gendered interests while discouraging others. The institutional practices that should be examined in this case may be anything from the underlying academic discipline that inspires the organisation, to incentive structures and working hours.
- *Historical analysis* to understand the institutional change over time.
- *Internal division analysis*: Roche argues that it is crucial to gain an insight into the diverging interests and power relations that characterise the organisation. Internal divisions may be informal (e.g. between new employees and established employees), functional (e.g. between departments), hierarchical, or based on gender, race or class.

- *Learning systems analysis*: Once one has a good grasp of the current state of the organisation, there is still an important question that needs to be asked: What is the organisation's potential for developing and changing – in the near future and in the longer term? In order to make educated guesses about this it is necessary to examine the organisation's learning systems, i.e. how the organisation learns from experience, how it adapts to changes in the environment, and to what degree it is able to bring about changes in its environment.

Roche elaborates on the last point regarding learning systems in relation to NGOs in particular. He points out that there are some common constraints to organisational learning in these organisations (and possibly also in government agencies):

- Learning is viewed as an overhead cost and will therefore frequently lose in the battle for priority;

- There are weak or downright discouraging incentives for admitting error;

- Information collection and dissemination systems are cumbersome and inefficient;

- There is a high need for success stories from an organisational point of view, and staff internalise this requirement;

- NGOs do not face the same market forces as firms, and therefore do not have the threat of extinction hanging over them if they do not learn and adapt quickly;

- The NGO's ultimate 'customers' (the beneficiaries) cannot guarantee the survival of the organisation in the same way that corporate businesses can rely on their customers.

Roche concludes by saying that a better understanding of a particular organisation, including the constraints it faces, is the first step towards promoting informed change.

Rondinelli, Dennis (1993) *Development Projects as Policy Experiments: An Adaptive Approach to Development Administration*. **London: Routledge.**

Rondinelli's book from the early 1990s is a sustained critique of the large-scale development planning and administration methods used at the time. While most other authors on organisational learning focus on organisations, Rondinelli tackles the issue of learning in conventional bureaucracies. His main criticism is that national-level development planning generally is too control oriented and top-down, thus cutting off the possibility of learning. He suggests that development projects and policies would be far more likely to achieve their stated objectives if they were designed to be adaptive, i.e. to respond to different contexts and circumstances as projects are carried out.

This book touches on the implications of this for national planning in developing countries. Rondinelli argues that when international donors and aid agencies require 'coherent' national development plans, this often results in too much emphasis on the apparent self-contained nature of such plans. However, plans on paper can be far removed from the reality they are trying to influence. Rondinelli therefore outlines several principles for making development administrations more adaptive and learning-oriented. Importantly, many of his principles are linked to the need for different forms of decentralisation. The objective of decentralisation is to bring policy closer to local practices and to make it more responsive to local failures and successes. Other principles relate to the possibility of viewing development policies as 'social experiments'. Experiments take into account the underlying uncertainty and the necessity of trial and error in order to learn. Experiments also take into account the fact that the unexpected may happen, and that both problems and solutions may have to be redefined along the way. Policy-making then becomes less a matter of prediction and implementation, and more a matter of questions and discoveries.

However, it is difficult to judge whether such an adaptive approach is feasible in practice. Rondinelli himself remains doubtful, as he states that bureaucracies 'are organised to standardise, routinise and limit individual discretion. Finding ways of inculcating the spirit of learning, experimentation and creativity in hierarchical bureaucracies remains a challenge for development administrators' (p. 130).

Savage, Charles (2000) 'The development of knowledge management and why it is important,' in *Knowledge Management for Development Organisations*, Report of the Knowledge Management Brighton Workshop 26–28 June 2000, University of Sussex. Canada: Bellanet International Secretariat. (available at www.bellanet.org/km/km2)

Charles Savage, president of Knowledge Era Enterprises, argues that if organisations want to succeed today, they have to adopt significantly different practices. The necessary shifts in organisational culture are summed up in Table 5:

Table 5 The shift from industrial to e-business

	Yesterday's industrial business:	Today's e-business
Strategy	Predict	Anticipation of surprises
Technology	Convergence	Divergence; New ways of working together
Management	Compliance	Self-control; Self-organising communities
Knowledge	Utilisation	Creation and renewal; Sense and respond
Assets	Tangible	Intangible; Knowledge intense
Organisation	Structure	Edge of chaos; Co-creation

Source: (adapted from Savage, 2000: 20)

He explains:

> 'The new environment changes the time-space dimension, the nature of organisation, as well as the ways we work, operating on the edge of chaos in which we are caught between controlling the known (a feature inherited from the industrial age) and discovering the unknown.' (p. 20)

Ability to operate at the edge of the unknown is one of the most valuable assets of today's organisations, and this ability depends on a supportive organisational culture that encourages learning and sharing. Savage suggests several ways that an organisation can work to improve its organisational culture, such as clearly expressing the values that the organisational culture is to be built on, actively fostering trust and openness, and allowing people to bring their 'feelings and hearts' into work.

Schein, Edgar (1992) 'The Learning Leader as Culture Manager' in *Organizational Culture and Leadership*. San Francisco: Jossey-Bass Publishers.

Schein argues that one of the most important factors determining successful innovation and learning strategies in organisations, is the ability of the leadership to manage change processes. He suggests that organisations can be divided into three categories: newly formed organisations, mid-life organisations and mature organisations. These three different types of organisations require different approaches to change management and different types of leadership. New organisations need leaders with self-insight, mid-life organisations need leaders who are able to read the surrounding culture and assess the added value that the organisation can bring, while mature organisations need leaders who are able to break the tyranny of old organisational patterns and communicate renewed vision.

The characteristic that cuts across these three typologies is the leader's ability to contain anxiety that may arise during a change process. Schein argues that in a change process (or in a constantly changing environment) it is crucial that the leader provides reassurance that it is possible to work out answers and to implement appropriate actions. In other words, the leader may not know the answer to every new situation, but should be confident that the organisation has sufficient resources to work out an answer in response to change, and should be able to communicate this confidence to the rest of the organisation.

Senge, Peter (1990) *The Fifth Discipline: The Art and Practice of the Learning Organisation.* **New York: Doubleday/Currency.**

This book has been widely cited within the knowledge management field. Unlike many other private sector consultants, Senge has also become influential outside the business sector and is used in international development organisations. Senge's book is based on his work as a management consultant, and he makes the same distinction as Argyris between first order and second order learning. While Argyris uses the terms 'single loop' and 'double loop' learning, Senge prefers to call them 'adaptive' and 'generative' learning. Adaptive learning simply responds to past errors and modifies future action. On the other hand, generative learning brings in the creative element and the ability to use new knowledge and change courses of action. Senge maps out five 'disciplines' or bodies of practice that organisations need to engage with in order to become generative learning organisations:

1. *Personal mastery*: This is the term Senge uses to refer to institutionalised conditions for personal learning within an organisation. It is related to issues of staff empowerment and the development of staff potentials.

2. *Mental models*: In an organisation, people will usually have different internal pictures of the world and how their organisation ought to operate. Senge draws on the distinction between tacit and explicit knowledge, and argues that it is important for people to make their mental models explicit so that they can be discussed openly and modified.

3. *Shared vision*: This discipline concerns the need for a certain degree of consensus within an organisation, and at the same time the need for inspiration and motivation. Senge suggests that both these concerns can be addressed through developing a shared vision.

4. *Team learning*: In organisations today, teams are becoming increasingly important actors. Senge states that 'teams, not individuals, are the fundamental learning unit in modern organizations; unless the team can learn, the organization cannot learn' (p. 40). This requires improved interpersonal communication between team members, a reduction in defensive behaviour, and openness to creative thinking.

5. *Systems thinking*: This is the 'fifth discipline' and the key to Senge's model of organisational learning. He suggests that it is crucial to examine the interrelationships between parts of an organisation rather than the parts in themselves. While a focus on individual parts would only obscure the need for larger change, a focus on the whole system makes it possible to identify how organisational change might be brought about.

Song, Steve (1999) *Guidelines on the use of electronic networking to facilitate regional or global research networks.* **Ottawa: International Development Research Centre. (available at www.idrc.ca/books/focus/890/15aSong.html)**

[Partly from abstract]
Recent developments in information and communications technologies (ICT) – including the rapid spread of telecommunications infrastructure and the growth of the Internet – have dramatically lowered the barriers to research collaboration in the developing world. Electronic networking offers the potential for researchers anywhere to communicate with peers in their field and to gain access to valuable research information via the Internet. However, while the problem of access is a substantial hurdle which has been overcome, there are many other barriers to successful electronic collaboration. This paper highlights some key issues to be aware of in fostering electronic collaboration.

Benefits of electronic networks are clear. They allow researchers to share information dynamically and far more quickly than previously and there are distinct advantages in terms of interaction. Song also points out that electronic networking should be seen as a tool to enhance the gain from face to face meetings, rather than a replacement for these. However, there are substantial prerequisites to a functioning electronic research network. Access to the Internet is not always guaranteed in Southern institutions even where it is physically possible. Political interests may provide obstacles, especially if the activity is perceived as undermining other authority structures. Equally important is a reliable commitment to the functioning of the network. Without fundamental buy-in from the participants, electronic networks are doomed to fail. In order to strengthen commitment, Song suggests that a network should have a facilitator who stimulates discussion, regularly summarises the debate, draws in inactive participants, and provides assistance to participants not previously familiar with electronic discussion forums.

Stacey, Ralph (1995) 'The Role of Chaos and Self-Organization in the Development of Creative Organizations', in Alain Albert (ed.) *Chaos and Society.* **Amsterdam: IOS Press.**

Drawing on chaos theory (transported from the physical sciences to social science issues), Stacey discusses the possibilities of moving away from 'equilibria' models of organisation to models that focus on nonlinear dynamics. In this paper he sets out the argument that organisations are nonlinear feedback networks. He argues that the 'nonlinearity' of networks is precisely what makes networks such valuable sites for innovation – e.g. the spontaneous relations formed between people, the irregular sharing of information, the informal learning processes that occur through interaction, etc. In formal institutions, the networks that form often function as 'shadow organisations' that creatively interpret and modify official strategies. More importantly, the informal networks continuously generate new and alternative strategies. Those unofficial strategies that survive and are picked up by various actors through the informal channels and networks will normally become institutionalised after a time, thus making them official. This reinforces the control of the formal management and provides some stability. However, new unofficial ideas and responses will already be forming. Stacey argues that this constant interaction between stable organisational elements and unstable informal networks is vital if an organisation wishes to succeed.

Stiglitz, Joseph (1999) 'Public Policy for a Knowledge Economy', Remarks at the Department for Trade and Industry and Centre for Economic Policy Research, London, 27 January 1999. (available at www.worldbank.org/html/extdr/extme/jssp012799a.htm)

The new information economy is changing market demand and supply, and economic fundamentals have to be revalued. Stiglitz' speech comments on these changes by focusing on three broad issues: the role of knowledge in development; the culture of the knowledge economy; and the implications of the new economy for democratic processes. Within development, there has been a shift from the 'weighty' economy where progress was measured against tangible infrastructure and factories, to a 'weightless' economy where monitoring focuses more on intangible outcomes such as increased awareness or policy change.

The culture of the knowledge economy requires a spirit of entrepreneurship and appropriate institutions. Stiglitz considers the subtleties of institutional knowledge transfer, and argues that this cannot be done according to any textbook model. Instead, local economic agents, who have the necessary tacit knowledge, must be supported in their adoption of universal institutional schema to their specific context. Knowledge-based development comes into play in the interaction between international and local actors. In this process, it is important to bear in mind that knowledge is best acquired not by passive rote memorisation but by active involvement. In other words, learning is by doing. This has profound implications for how to bring about knowledge-based transformation:

> '"Best practices" that are imposed on a country by conditionalities ("carrots and sticks") will not produce lasting change. It will undermine people's incentives to develop their own capacities and weaken their confidence in using their own intelligence. The external development agency, instead of acting as a catalyst or midwife to empower change, will only short-circuit people's learning activities and reinforce their impotence.'

Stiglitz continues by outlining a few basic analytics of the knowledge economy. Knowledge is a public good and a non-rivalrous asset. It must be protected to some degree by intellectual property rights, but the externalities (spillovers) will have wider positive effects. Stiglitz also reviews issues related to competition, openness and experimentation. He concludes by detailing several policies that can be adopted by governments to support and gain greater advantage from the knowledge economy. It is important to increase human capacity by investing in education, finding means of fostering creativity, and development of science and technology. Government has a role to play in picking winners with large externalities.

Stone, Diane (1996) *Capturing the Political Imagination: Think-tanks and the Policy Process*. London and Portland: Frank Cass.

Stone sets the scene by establishing the potentially significant role played by think-tanks today:

> 'Ideas matter. It is also the case that ideas do not matter. If the intellectual weight of ideas alone were sufficient to influence political thinking, then the organisations that are the subject of this book might not exist. Ideas need organisations to propel them within the hearing range of decision-makers. Organisational infrastructure plays a significant role in the influence of ideas alongside the individual agents of ideas – scholars and intellectuals. Accordingly this book argues that independent policy research institutes – better known as think-tanks – have become increasingly visible policy actors.' (p. 1)

Stone discusses in-depth several of the characteristics, opportunities and challenges of think-tanks in current political contexts, focusing especially on think-tanks in the US and UK. She argues that their influence must be understood against the background of a network of relationships between

think-tank scholars and decision-makers, through which subtle processes of agenda setting and policy entrepreneurship are played out. Analysis of think-tank influence should therefore not be limited to direct policy impact, but should include the indirect effects of think-tanks' independent identity, their broad networks and their dissemination mechanisms. Stone also discusses the current funding environment in which think-tanks operate and the consequences of this for their relationship to government. The book includes a comprehensive appendix that lists major UK and US think-tanks with brief notes on each.

Struyk, R (2000) *Transnational Think-tank Networks: Purpose, Membership and Cohesion*. **Washington, DC: Urban Institute.**

This short paper provides a brief overview of issues related to think-tank networks. Think-tank networks are different from public policy networks in that they are usually made up of organisations with more or less the same interests and fundamental views. In this respect they are similar to epistemic communities. Think-tank networks are typically characterised by webs of relatively stable relationships and informal interactions based on these relations. They are also generally non-hierarchical, and attempt to pool and share resources in a mutual manner.

Struyk lists four criteria that can be used to classify different types of networks:
- *Objective*. This can be for example efficient flow of knowledge among members, or specific spheres of influence;
- *Incentives for participation*. The costs involved can be miniscule, or can increase as members are required to attend conferences and contribute regularly. These different types of effort required also bring different types of benefits, ranging from access to information to greater visibility and influence;
- *Basis for membership*. Networks can be completely open, or restricted in various ways;
- *Network coherence*. This refers to the degree to which the network manages to build effective working relations and a sense of community amongst its members.

Struyk applies these criteria to various existing networks and highlights the fact that two-thirds of the networks have a specifically regional focus, which may be an advantage as far as knowledge sharing and policy influence are concerned.

Surr, Martin, Andrew Barnett, Alex Duncan, Melanie Speight, David Bradley, Alan Rew and John Toye (2002) *Research for Poverty Reduction: DFID Research Policy Paper*. **London: Department for International Development, UK (DFID). (available at www.dfid.org.uk)**

[From the executive summary]
This paper proposes policies and principles to guide DFID's research work over the longer term. The critical issue for the future is how to improve researchers' effectiveness in producing outputs that directly and indirectly change both policy and practice, are truly relevant to poor people's needs, and are effectively taken up. The report argues that to be effective, 'research' must be located more securely in the context of wider 'knowledge' or 'Innovation systems'. This implies that:
- The effectiveness and impact of research will be a function of a large number of other elements of the system being in place;
- Success is driven by continuous interactions between 'supply drivers' and 'demand drivers';

- 'User engagement' is likely to be a key success factor and ultimately lead to improved dissemination and uptake and research outputs;

- Networks and trust-relationships between the various players are central to knowledge systems, primarily because they lower transaction costs and form the key communication channels between suppliers and users.

A framework for future support to research is outlined. As part of this process consideration is given to the roles that the Millennium Development Goals (MDGs) and users of research contribute to the framework. The report notes:

- The very weak capacities in some countries to articulate needs for research and to utilise what is already known;

- The necessity to disaggregate research needs and to invest more effort in understanding the diversity of needs (particularly to include the needs of many types of user) and the extent to which research can meet them;

- That DFID may assume too easily that its staff know the needs of poor people;

- The necessity to consider the quality and appropriateness of research output in relation to the needs of its intended users, rather than necessarily by peer reviewed journal articles in English;

- The MDGs provide a certain degree of focus, but set a domain of research problems far larger than DFID can address alone;

- The MDGs provide a single orthodoxy for the developmental process, but the risks of this strategy can be reduced by independent research that challenges the current paradigm, tests its effectiveness, and searches out new and emerging issues.

A number of key issues are identified which would have to be addressed in any future research strategy for DFID. These include the following issues:

- Research-related capacities in developing countries need to be strengthened in order to access, produce and utilise research. The evidence suggests that the capacity of developing countries to generate, acquire, assimilate and utilise knowledge will form a crucial part of their strategies to reduce poverty.

- DFID has made insufficient headway so far in meeting the demand for locally relevant poverty reduction information.

- 'User engagement' must be increased both to determine research needs, but also to facilitate uptake.

- 'Uptake mechanisms' need to be developed within developing countries, within the international development community and within DFID.

- Networks need to be supported as key elements in promoting the take up of research results.

Sutton, Rebecca (1999) 'The Policy Process: An Overview', *ODI Working Paper* **118, London: Overseas Development Institute. (available at www.odi.org.uk/publications)**

This paper offers an introduction to analysis of the policy process. It identifies and describes theoretical approaches in political science, sociology, anthropology, international relations and management. It then reviews five cross-cutting themes: (i) the dichotomy between policy-making and implementation; (ii) the management of change; (iii) the role of interest groups in the policy process; (iv) ownership of the policy process; and (v) the narrowing of policy alternatives. The paper concludes with a 21-point checklist of 'what makes policy happen'. A glossary of key terms is also provided. The key argument of the paper is that a 'linear model' of policy-making,

characterised by objective analysis of options and separation of policy from implementation, is inadequate. Instead, policy and policy implementation are best understood as a 'chaos of purposes and accidents'. A combination of concepts and tools from different disciplines can be deployed to put some order into the chaos, including policy narratives, policy communities, discourse analysis, regime theory, change management, and the role of street-level bureaucrats in implementation.

Suzuki, Naoki (1998) *Inside NGOs: Learning to Manage Conflicts between Headquarters and Field Offices*. **London: Intermediate Technology Development Group Publishing.**

Suzuki's book deals with the practical issues that confront staff in an international NGO, particularly the issues that arise out of the distance between headquarters and field offices. The geographical distance is only one dimension of the gap between the centre and regional NGO offices. There is also frequently a gap in terms of strategic outlook. While staff at the head office tend to be concerned with funding, strategy and organisation-oriented practices, field staff find themselves occupied with a need to understand contextual factors, and to make immediate and independent project decisions. Typically, field office staff are annoyed at the constant requests sent out from the head office and see this as adding to their already overburdened work load – while imagining that head office staff exclusively spend their time composing the next request to the field. Head office staff, on the other hand, lament the fact that field offices cannot even comply with the simplest appeal for project information, and when the project information is finally sent, it is invariably in the wrong format.

Suzuki suggests that the tensions between headquarters and field offices are inherent in any international NGO and cannot be eliminated. However, each organisation should be able to put in place certain processes to make it easier for staff to cope with and resolve the tensions that naturally arise. Which processes are most appropriate will depend on the organisational culture, the funding sources and funding regulations, and the organisation's stakeholders and wider constituency. Some development agencies will need to keep a strict emphasis on standard systems across the board and only allow occasional 'out of the box' projects. Other agencies will be able to encourage independent decisions and contextual adaptation to a larger degree, within the remit of an overarching organisational vision.

Uphoff, Norman (1992) *Learning from Gal Oya: Possibilities for Participatory Development and Post-Newtonian Social Science*. **Ithaca, NY: Cornell University Press.**

This book recounts the drama of a remarkably successful experiment – the Gal Oya irrigation project – that introduced farmer organisation for self-managed development in the largest and most run-down conflict-ridden irrigation system in Sri Lanka. The project involved 10,000 to 15,000 farmers, and what fascinates Uphoff is the system of cooperation and mutual support that gradually developed between them as the project progressed over the span of a decade.

The main conceptual framework adopted by Uphoff to reflect on learning is 'post-Newtonian social science'. By this he means a framework that moves away from Newton's mechanical model of reality. In a Newtonian mechanical model, everything is determined by the relations between the different parts of the machinery, i.e. certain inputs will lead to certain predictable outputs. There is no organic growth. Uphoff argues that a mechanical model is not helpful for understanding the reality surrounding development projects. Instead, it is far more useful to take a post-Newtonian view:

'One of the most powerful and at times overwhelming impressions we got from being involved in this project in Gal Oya was the *changefulness* of reality, along with its multifaceted and frequently paradoxical appearance.' (p. 20, original emphasis)

Uphoff argues that the unpredictability of reality sets limits to development planning, and highlights the advantages of a flexible development approach that allows space for organic growth of various relationships and processes. If this is to work within a project framework, the project needs to be open to continuous learning.

Volkow, Natalia (1998) 'Strategic Use of Information Technology Requires Knowing How to Use Information,' in Chrisanthi Avgerou (ed.) *Implementation and Evaluation of Information Systems in Developing Countries*, Proceedings of the Fifth International Working Conference of the International Federation for Information Processing, Working Group 9.4, 18–20 February 1998, Bangkok.

Information technology is often promoted as the solution to most of the information and communication problems faced by organisations today. IT is marketed as a technology with the competitive advantage in terms of increasing productivity and communication efficiency, and in facilitating responsiveness. Volkow argues that these assertions are myths, and that installation of IT systems alone is not enough to improve performance. Her argument can be summed up by the sentence: 'Strategic use of information technology requires knowing how to use information'. If organisations are to benefit from IT, they have to consider to what extent their structures, practices and management are geared towards handling information itself. The wider national context, culture and human resources capacities are also important factors in this process.

Volkow also points out that information systems are social systems. Therefore information systems change must be developed in tandem with investment in the people who are to use the systems, because they are at least as important as the technology itself in ensuring the efficient working of the system. The human element in the use of information and IT means that information systems are inevitably 'messy' processes, and this is best dealt with if the people concerned are viewed as valid contributors to the process, rather than attempting to rule them out through relying on top-down implementation models.

World Bank (1999) *World Development Report 1998/99: Knowledge For Development.* Washington DC: World Bank. (available at http://www.worldbank.org/wdr/wdr98)

[From the WDR overview]
Knowledge is like light. Weightless and intangible, it can easily travel the world, enlightening the lives of people everywhere. Yet billions of people still live in the darkness of poverty – unnecessarily. Knowledge about how to treat such a simple ailment as diarrhoea has existed for centuries – but millions of children continue to die from it because their parents do not know how to save them. Poor countries – and poor people – differ from rich ones not only because they have less capital but because they have less knowledge. Knowledge is often costly to create, and that is why much of it is created in industrial countries. But developing countries can acquire knowledge overseas as well as create their own at home. 40 years ago, Ghana and the Republic of Korea had virtually the same income per capita. By the early 1990s Korea's income per capita was six times higher than Ghana's. Some reckon that half of the difference is due to Korea's greater success in acquiring and using knowledge. Knowledge also illuminates every economic transaction, revealing preferences, giving clarity to exchanges, informing markets. And it is lack of knowledge that causes markets to collapse, or never to come into being.

This 'World Development Report' proposes that we look at the problems of development in a new way – from the perspective of knowledge. There are many types of knowledge. In this Report we focus on two sorts of knowledge and two types of problems that are critical for developing countries:

- *Knowledge about technology*, which we also call technical knowledge or simply know-how. Examples are nutrition, birth control, software engineering, and accountancy. Typically, developing countries have less of this know-how than industrial countries, and the poor have less than the non poor. We call these unequal distributions across and within countries 'knowledge gaps'.

- *Knowledge about attributes*, such as the quality of a product, the diligence of a worker, or the creditworthiness of a firm – all crucial to effective markets. We call the difficulties posed by incomplete knowledge of attributes 'information problems'. Mechanisms to alleviate information problems, such as product standards, training certificates, and credit reports, are fewer and weaker in developing countries. Information problems and the resulting market failures especially hurt the poor.

The relationship between knowledge gaps and information problems, their impact on development, and the ways that international institutions and developing-country governments can better address them are the central themes of this Report. As we shall see, considering development from a knowledge perspective reinforces some well-known lessons, such as the value of an open trade regime and of universal basic education. It also focuses our attention on needs that have sometimes been overlooked: scientific and technical training, local research and development, and the critical importance of institutions to facilitate the flow of information essential for effective markets.

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