Knowledge Society, Education and Aid

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ABSTRACT  The paper describes the salient features of the emerging knowledge society, its relationship with education, the role of the international organisations in knowledge development and knowledge management, and specifically the need for knowledge-based aid policies. The paper argues that development of strong education systems, including specifically higher education and research systems, is a necessary prerequisite for development of a knowledge society. International aid organisations have been active in the development of education directly, and thereby in knowledge development indirectly in developing countries. Some organisations have also initiated efforts that aim at knowledge development and management directly. But the approaches of international organisations for knowledge development and management need to be modified to suit the divergent dynamic socio-economic conditions and national policies. Also based on the principle of comparative advantage, it can be suggested that knowledge development should be the main responsibility of governments in developing countries, while knowledge management could be the task of the international aid organisations.

When you know, to know that you know
And when you do not know, to know that you do not know,
That is knowledge. (Confucius, Analects, c.500 BC, book 2, chapter 17) [2]

Terms like ‘knowledge societies’ or ‘knowledge-based societies’ have become attractive during the last couple of years. Are these terms altogether new? Or have they only now become relevant for the modern society of the twenty-first century? While the World Bank (1999) has recognised the importance of knowledge in development only recently as a special area of focus, its importance has been widely noted by development thinkers for several centuries. After all, since time immemorial, knowledge has played an important role in the progress of human society. There has been knowledge, and it has contributed to development in almost every society known to us. It is widely recognised that knowledge is development. The role of knowledge in development of societies was well described long ago by Hayek (1945). Knowledge was accorded a special place in human capital theory. During the post-war period, Fritz Machlup (1962) studied nearly four decades ago, in a wider human capital framework, both production and distribution aspects of knowledge in detail. What is being discussed nowadays fashionably as knowledge development refers to the production of knowledge that Machlup discussed,
and what is discussed fashionably as knowledge management refers to the distribution of knowledge. Thanks to the stimulating works of Machlup (1962; also 1982) and also of human capital economists, by the end of the 1980s and the early 1990s, the critical relevance of knowledge—it’s production, distribution and utilisation—in the process of economic growth had been widely acknowledged. Knowledge has become the most important factor of economic growth. As a study by the OECD (1998, p. 4) pointed out, ‘underlying long-term growth rates in OECD (Organisation for Economic Cooperation and Development) economies depend on maintaining and expanding the knowledge base.’ Knowledge ‘as a form of symbolic capital’ is also recognised as ‘the central form of productive capital.’ In short, social and economic progress is achieved by many countries principally through the advancement and application of knowledge (World Bank, 2001).

Though many of the terms such as ‘knowledge society’ or ‘knowledge-based society’ could be traced thus at least to the 1960s, if not earlier, they appear to be new, promising economic miracles. For example, the Prime Minister of India stated in his inaugural address to the ASSOCHAM (Associated Chambers of Commerce and Industry of India) Summit on ‘India in the Knowledge Millennium’ (New Delhi, 18 December 1999), ‘a knowledge based society will enable us to leap-frog in finding new and innovative ways to meet the challenges of building a just and equitable social order.’ What is new about all this? As Stehr (2001, p. 43) rightly observed, ‘knowledge societies have always existed; what is new is the speed at which knowledge is growing.’ The sheer volume of knowledge and the pace at which it is exploding is indeed astonishing, particularly during the last few decades. As the Task Force on Higher Education and Society (2000, p. 17) observed, ‘the “knowledge revolution” has seen exponential and continuing increases in knowledge.’ Socio-economic developments on the one hand, and technological development on the other, have both been responsible for the knowledge explosion. Not only the pace of production of knowledge, but also the pace at which it becomes obsolescent is indeed a remarkable feature of the twenty-first-century society. So it is not just production of knowledge and access to knowledge that is important, but also the speed at which access to marginal additions to knowledge can be obtained becomes critical (Stehr, 1994, p. 98). The sheer pace also leads many to argue that there is a ‘sea change’ not a mere ‘sharp discontinuity’ in the evolution and development of knowledge-based society (David & Foray, 2002, p. 9). All this has contributed to the recognition of the importance of knowledge management. Often more attention is being given to knowledge management than to production or creation of knowledge, as knowledge management ‘presents a significant business opportunity’ (Serban & Luan, 2002, p. 5).

What is Knowledge?

Knowledge is a wide concept, the scope and boundaries of which may be difficult to define. As Machlup (1982, p. xiii) defined it, ‘my concept of knowing and knowledge are unusually wide. I do not confine myself to scientific or technological or verified or practical or intellectual knowledge. Anything that people think they know I include in the universe of knowledge.’ Knowledge can be classified typically into popular knowledge and erudite knowledge. The former is common-sense knowledge of the everyday world, acquired through experience. This is very important, but ‘unorganized knowledge which cannot possibly be called scientific in the sense of knowledge of general rules: the knowledge of the particular circumstances of time and place’ (Hayek, 1945, p. 521,
quoted in Griliches, 2000, p. 88). It is possible to acquire such knowledge with or without formal education and training. Or it may be very difficult to acquire it and transfer it, as it is unorganised. When one discusses nowadays knowledge societies, certainly, it is not the popular or the common-sense knowledge that is being discussed, though this is very important. It is the erudite knowledge, which is generally produced traditionally in the universities, research institutions, and other academic places, including libraries, laboratories, seminars, and conferences, which can also be described as ‘research-based knowledge’ (Reimers & McGinn, 1997, p. 197), that is of prime concern.

The concept of ‘knowledge society’ is being given a wider interpretation in nature and scope than the traditional concepts of ‘literate society’, ‘learning society’ and ‘educated society’, though they are very closely related, so closely related that there is a danger of their being treated synonymously. Ideally, knowledge society presupposes not just a literate, or a computer-literate society, not even a just educated society, but a highly educated society, and not just skilled workers, but ‘knowledge workers’ (see Majumdar, 1998). In addition, a knowledge society is characterised by three important attributes, namely, creative capacity, innovative talent and ability to determine relevance (Anandakrishnan, 2001). All this can be created and nourished by good vibrant education and training systems. The creative capacity is demonstrated by the generation of new knowledge and extensions to existing knowledge; the innovative talent is reflected in the improvements in quality to existing products and their functions; and a knowledge society successfully determines the relevance of the various creative abilities and innovative talents suitable to its specific needs by evolving appropriate knowledge systems. Much of the available knowledge, particularly that which is highly technical, cannot be absorbed without specific and extensive training. Hence the importance of effective training systems. Moreover, a large amount of knowledge is tacit, and cannot be easily communicated even by the one who knows it (Griliches, 2000, p. 88) [3]. Effective training systems help in improving the communication.

The most important aspect of ‘knowledge society’ lies in its education system, more particularly the higher education system. Universities are, by nature, committed to ‘advancing universal knowledge’ (Kerr, 1994, p. 6). Education and research are regarded as public goods, so is knowledge. Knowledge is a public good (Hartwick, 1992); and hence governments have to invest heavily in the creation and dissemination of this public good. Knowledge is, in fact, an international public good or global public good (Stiglitz, 1999), the externalities of which flow widely across national boundaries. Due to the presence of externalities, the knowledge created in one system tends to percolate and interact with systems of knowledge creation in other systems and countries.

The nature of the emerging knowledge society is also to be understood in the overall international context of globalisation, marketisation and technology explosion, i.e. ‘knowledge society’, ‘global(ised) society’, and ‘technology society’ or ‘information technology (IT) society’ are closely related with implications for each other, and it may not be proper to view them as separate systems, though they are also not the same. Some of the implications of development may seem to be common to all these strands. While universities and research institutions create and rediscover knowledge, it is the technology that helps in its rapid dissemination, and the process becomes faster in a globalised world, where individual countries are integrated with the rest of the global system. In this sense, all three mutually interact with and reinforce each other (Tilak, 2001b). The interplay of these factors may also make it difficult to distinguish the features or effects of each of them.
'Knowledge society' has become a buzzword, and most countries of the twenty-first century aim at becoming knowledge societies. Some of the emerging trends of a knowledge society may be new, and some may be highly disturbing (see Gibbons et al., 1994; Weiler, 2001). The criteria by which the validity and adequacy of knowledge are measured, and the methods of production of knowledge, seem to undergo tremendous changes. As Muller (2001) summarised, there can be a remarkable shift in the social organisation of the production of knowledge—from a traditional mode to a new mode—from orthodox, conventional, traditional methods of knowledge production (disciplinary research) and dissemination to modern, transdisciplinary methods of knowledge production. In the modern knowledge society, the problem-solving approach to research gets favoured over the traditional academic research, where knowledge is disciplined and determined by disciplines (disciplinary research). In the problem-solving approach, the approach would be transdisciplinary, trans-institutional, and even transnational. In the disciplinary research, peer group review of research provides scope for ensuring quality and even excellence; such an approach gets replaced by methods that evaluate research against 'hybrid contextuality relevant criteria’ and evaluation thus becomes a new field of research. Similarly, accountability of the research community also shifts towards a hybrid social accountability—to donors, to local communities, to diverse disciplinary communities, to local governments, to corporate concerns, etc. In the new mode, knowledge is produced through addressing the problem directly; while in disciplinary research the research problem originates within the problematics of the discipline; the problem of problem-solving research arises in a context of application. Also the distinction between knowledge and information gets blurred. For example, many confuse information with knowledge and tend to equate knowledge society to information society (Torres, 2001, p. 115). As discussed in the later part of the paper, some of these trends may be attributed to the growth of international aid business in developing countries (see also Tilak, 1996a).

Another important but closely related aspect of knowledge societies is convergence—convergence of knowledge from various disciplines. The new knowledge system may be free from rigid boundaries between sciences, engineering, arts and humanities (Anandakrishnan, 2001). Knowledge in a field of specialisation is combined with an understanding in many associated fields of interest. But the danger is no area of study may get focus. Specialisation in research is conventionally a highly valued basic principle for advancement of frontiers of knowledge, though as Muller (2001, p. 14) observed, knowledge specialisation is a two-edged sword and comes at a price. Despecialisation, in the name of convergence, may be costly for the very creation of fundamental knowledge. Convergence, if not despecialisation per se, becomes the order of the day in a modern knowledge society. There may be wholesale introduction of interdisciplinary programmes not only in research but also in graduate level studies.

In an emerging knowledge society, the whole mode of education, higher education in particular, shifts in favour of the above trends. The overall trends could lead to tensions and conflicts between teaching and research (and training), between long-term intellectual work and short-term strategic work, cognitive-analytical activities and strategic activities, between knowledge and information, between social justice concerns and development concerns and between critique versus reconstruction in the intellectual activities. Ethical rules in the creation and distribution of knowledge (Kerr, 1994) may take an altogether different form. There have been very significant shifts in paradigms of knowledge development (DSE, 1998). The hiatus between knowledge for power and knowledge for people’s needs seems to increase.
All these may be indicative of ‘the deepening sense of crisis in the modern knowledge system’ (Kothari, 1988, p. 7).

Conventional methods of knowledge creation and dissemination have to be clearly planned and deliberately worked for, while modern methods do not have to be created and no special measures are needed for their spread, as they are ‘market-pulled’ (Muller, 2001, p. 48) and technology-driven. There is a great danger in this, as some of the harmful trends cannot be regulated. Hence a careful plan is required on progressing towards a modern knowledge society. Creation and development of a strong and sustainable knowledge base take time. Systematic, long-term and sustained efforts are necessary for the creation and development of knowledge. How efficiently and rapidly this can be done depends upon the level of development of education, more specifically higher education, and research systems in developing countries. Knowledge societies require people with high levels of knowledge and new sets of skills. People need to have higher qualifications capable of greater intellectual independence. They must be flexible and be able to continue learning well beyond the traditional age for schooling. Thus the implications of the knowledge society for education systems are indeed profound (see Task Force on Higher Education and Society, 2000).

But in recent years, constrained by resources on their own, or compelled by the strings attached to international aid, developing countries paid scant attention to higher education and research. Public funding for research institutions has been seriously affected. The economic reform policies, which are largely market-friendly reform policies, inflicted deliberate cuts in public budgets for higher education and research not only in developing counties (see for example Tilak, 1992, 1996b), but also in the developed countries (see Guena, 1999). The private sector is rarely found filling the vacuum. All this can create serious problems in building and sustaining a strong knowledge base and in creating a strong and vibrant knowledge society. National governments and international organisations may both pay a heavy price for short-term myopic policies that cause neglect of higher education and research systems in developing countries.

It is necessary that universities and other institutions of higher education and research be paid attention by the policy-makers in developing countries.

(a) As higher education has not expanded enough in several developing countries, efforts have to be made for the growth of higher education systems. After all, it is the higher education systems that provide knowledge workers, the critical necessary force for the development of a knowledge society.
(b) The quality aspects of higher education in several developing countries also require serious attention by the governments.
(c) Training has to be separated from higher education, so that universities concentrate on expansion of frontiers of knowledge. Imparting of vocational skills and training in market-relevant activities may yield quick monetary returns, but this need not be a function of the universities and research institutions (see Béteille, 1995).
(d) Traditionally, both teaching and research are important functions of universities. Research creates and rediscover knowledge, while teaching helps in transmission of knowledge. Universities have to balance their teaching and research; focusing on one should not lead to ignoring the other altogether. All higher education institutions need to be developed into centres of excellence in teaching and research as well.
(e) Higher education systems do not stand on their own. They critically depend upon school education systems. The quality and quantity of school education determines
the quality and quantity of higher education. Hence, holistic planning of education giving due importance to all layers of education is important.

(f) Public funding of education, including specifically higher education and research, is a must in the developing countries. Recent cuts in public support have caused serious harm to the higher education systems in several developing countries.

Knowledge-Based Aid

International aid is not a new phenomenon. Many international organisations have been active in providing aid—loans and grants—for education and through aid in the development of education directly, and thereby in knowledge development indirectly in several developing countries. Some organisations have also initiated efforts towards directly contributing to knowledge development and management. Yet there is a long way to go.

Aid for education is not new. Many developed countries, international organisations, and developing countries have been involved in the ‘education aid-business’ for several decades. The recent interest in ‘knowledge-based aid’ may be an acknowledgement on the part of the aid organisations of the fact that most aid policies until now have not necessarily been knowledge-based. One may rightly get such a feeling, noting the adoption of the same kind of methodologies, framework, terms, conditions, aide-memoires, reviews, appraisals, reappraisals, predetermined policy prescriptions, etc., in the aid programmes, whether the programmes are in sub-Saharan Africa, or in South East Asia, South Asia or Latin America and whether they refer to energy, power, infrastructure or education, health or poverty. So while aid is not new, knowledge-based aid may sound new. The realisation of the need for knowledge-based aid is new and important. This is indeed a great realisation. This also explains to a great extent why international aid did not lead to substantial improvement in developing countries in the past.

What do we know about aid? As many authors in Carlsson and Wohlgemuth suggest, we know that we have little knowledge of how aid works. This is an important starting point, for those who think that they know everything will never learn. However, we are not exactly in a vacuum. A knowledge base does exist relating to the aid mechanisms, aid policies and their effectiveness, though the base is not as strong as one expects. It is also not uniform in all countries and among all aid organisations. There are wide variations and big gaps in the quality and quantity of the knowledge base.

The base of the knowledge of various aid organisations is highly uneven. While a few organisations are better endowed, many are not; many are, in fact, new to the aid business and to knowledge as well. Some of the international aid organisations are not necessarily knowledge-building (if not knowledge-creating) or learning institutions. For example, the International Monetary Fund, the World Bank, the Asian Development Bank, the African Development Bank, etc. are primarily lending organisations. For them lending is not an instrument of learning; learning cannot be an objective of their lending mechanisms; in fact it is the other way round: they might try to learn so that their lending mechanisms are made more effective and efficient. Lending is the means as well as the end. If the lending programmes contribute to an increased knowledge base, this can be mainly viewed as a spillover effect, rather than being the main product, though such spillover products can also be substantial and significant. But it may be too much to expect these lending organisations to become ‘knowledge banks’ or ‘learning organisations’. They can at best become knowledge management institutions. For example, World Bank started a Programme/Division of Knowledge Management (see King, 2001, for details).
On the other hand, there are some organisations that are not primarily lending organisations. They may provide various types of assistance—monetary or technical, including research—to developing countries. For example, UNICEF, UNDP and UNESCO are those that can be considered as having relatively more interest in learning and building a knowledge base. The third group of organisations, mostly bilateral, such as the Canadian International Development Agency (CIDA), the Swedish International Development Cooperation Agency (Sida), the Swiss Development Corporation (SDC), the Japan International Cooperation Agency (JICA), the Overseas Development Administration (ODA)/Department for International Development (DFID of UK), and Deutsche Stiftung für Internationale Entwicklung (DSE), may try to balance their interests in aid and learning, depending upon their own requirements. Sometimes they may take more interest in lending and sometimes more in research and development, and thereby in learning. International organisations like the International Development Research Centre (IDRC) (see King, 2000) or the International Institute for Educational Planning (IIIEP) (see Hallak, 2000) or networks like NORRAG and Southern Educational Research Initiative (SERI) may indeed be more interested in developing a strong learning base on development and development cooperation. Anyway one cannot, and rather should not, expect aid organisations to become primarily knowledge banks or learning institutions or reservoirs of knowledge. After all, that is not their primary job.

On the whole, developing countries might take the view that many of these aid (more particularly lending) organisations rarely learn from their experiences; they know very little about developing countries and refuse to learn much from developing countries. At best they are considered too slow to learn. This may be because of the familiar arrogance of the aid organisations that knowledge transfer is necessarily a one-way transaction—from the aid organisations or developed countries to developing countries. The aid organisations could be viewed as ‘anti-learning’ by their inherent nature and culture. As Elliot Berg (2000) observed, international aid agencies respond slowly to failures. There is a need to stress that these aid organisations have to be responsive to knowledge, and not be sticky and adamant; they should be ready to change. It also means that the aid-receiving countries have to be responsive to the new knowledge of changing national and global environments.

On the other hand, the aid organisations assume that no knowledge base exists in the developing countries; if it does, it is insignificant, it is not useful, and it is not relevant. The knowledge base accumulated in developing countries over long periods is rarely recognised; in fact, there is an ‘outright disregard’ for locally-based knowledge (Box, 2000; Cheng, 2000; Grape, 2000; and Wieslander, 2000). Such an approach will not work. Developing countries and aid organisations have to learn from each other. However, in better developed knowledge societies, it is possible that local knowledge may come to occupy an increasingly important place (Scott, 1995, 1997).

Knowledge-based aid policies should imply that a knowledge base is important both for aid organisations and developing countries. A good and sound knowledge base is important not just for aid organisations, but also for the aid-receiving developing countries. It is critically important for both. The costs of having no strong knowledge base and, as a result, of having the wrong policies, could be serious for aid organisations in terms of inefficient, uneconomic or unviable investments of monetary resources. These are only short-term costs. But the costs for the developing countries could be far more serious in terms of social, economic and political dimensions. They are indeed huge and potentially even long-term in their effect. Hence developing countries should
be more concerned about building up a knowledge base on aid policies, mechanisms and their impact.

Therefore, I argue that governments may have to assume a more important role in building a critical, sound and sustainable knowledge base, as the risks involved are higher for them. International organisations may supplement, and only supplement, the efforts of the domestic governments. It will be in the interests of the developing countries if the aid organisations do not substitute for the efforts of the governments in building knowledge bases. Moreover the developing countries may be in a better position to develop a critical, useful and relevant knowledge base than foreign countries or international aid organisations. As the World Bank (1999, p. 130) also admitted, ‘it is knowledge created in developing countries themselves that usually is most important’.

Knowledge of what? Hans Weiler (1984) observed that each aid organisation marches to two sets of drums—the aid agency’s own and the recipient country’s. Others who add noise include other aid organisations, the sociopolitical environment, including non-governmental organisations, etc. Probably the aid-receiving developing countries also march to these three sets of drums: the concerned aid organisation, other aid organisations, and domestic policies, including political opposition parties in democratic societies, and of neighbouring countries.

Knowledge of what is important? What is required first is knowledge of a country’s historical evolution of sociopolitical, cultural and economic development policies, current situation, current policies—sector-specific and overall—and their effectiveness, likely impact of aid on systemic improvement, whether it increases donor dependency, whether it would lead to increased debt burden, whether the aid would work as additional resources or merely substitute for the domestic spending, and what the sustainability of the projects is. What is the effect of aid on the sector and other sectors? All these are basic questions about which knowledge is essential. Secondly, knowledge of the given aid organisation’s policies and policies of other aid organisations in the wider international environment is critically important both for the concerned aid organisations (and their consultant and mission staff) and the recipient countries. Thirdly, knowledge of global socio-economic political context, the rapidly changing development policies and strategies and future scenarios is important to situate one’s own national context in the global arena.

What are the sources of knowledge? Obviously long-term erudite research conducted in the universities, and policy research and other institutions—governmental or non-governmental—forms the most important base of knowledge. Secondly, sector and country studies—analytical and prescriptive—conducted under technical assistance of the projects by the aid organisations, also provide a good base of knowledge. Thirdly, mission reports and evaluation reports do provide some useful information. Of these and others, scholarly research is the most important source. Technical assistance is focused but less rigorous and analytical; evaluation and mission reports are more focused but least reliable as they are based on meetings, discussions, and impressions gained during short visits. They may rarely add to new knowledge. Technical assistance generally takes two forms: (a) hiring of consultants and advisers for the short term; and (b) institutional development with a goal of building capacity and improving capacity through development of skills and strengthening of institutions. Only the latter type helps in capacity building and it is a long-term process. The international organisations can also learn a lot from properly designed technical assistance activities.

International cooperation in the area of research takes several forms, amongst which the following are important: (a) research by the international organisations; (b) funding
of research to be conducted by national researchers and research organisations; and (c)
joint or collaborative research. Research of type (a) is largely conducted by the
international organisations themselves, and/or through consultants hired by the inter-
national organisations. The consultants in many cases, but not necessarily in all cases,
are drawn from outside the country. While the second type is more important for
institutional development, it is the third type, namely, collaborative research between
international organisations and the research community in developing countries and
between different countries, that would be of much significance in creating knowledge
as an international public good (see CESO, 1988).

International cooperation in research, particularly in the area of education develop-
ment and policy, which largely takes the form of research by the consultants, if not
consultancy, funded by aid organisations, can produce undesirable effects: first, it tends
to displace public funding for research; it also sets new research agendas; the short-term
needs and compulsions of international research also contribute to negating the value of
long-term research, and building of sustainable capacities of the universities and research
institutions; and as a corollary to research conducted or sponsored by international
organisations, domestic research generally gets devalued. The devaluation of local
research is made not only by the international organisations, but also by the local
governments and research community in the country. There can also be a great shift in
the research paradigm: research may no longer mean the creation of knowledge or a
search for absolute truths, as espoused by long traditions in research in sciences—social
and physical sciences; it may be more concerned with pragmatic aspects of feasibility.
Research on how to do (know-how) replaces intellectual and academic research. The
distinction between information and research becomes very thin. A large part of the
research conducted under the framework evaluations contributes to this phenomenon.
Given the short-term nature of research by the international organisations, there is a
danger of a shift in preferences: short-term and instant and prescriptive research is
preferred to long-term analytical research. Similarly, basic research gets traded off in
favour of pragmatic research. Despite all this, international organisations have the
potential to play an important positive role in helping developing countries in building
a strong and sustainable knowledge base.

Capacity building is a familiar explicitly stated objective of several international aid
programmes. It was meant to build capacity of institutions and manpower in developing
countries. Today very few would say so unhesitatingly. It is being realised that capacity
building of the aid organisations is also important, as a plethora of new international aid
organisations enter the aid business in developing countries. For many of them both
aid and knowledge are new. As King (1991) observed, international aid organisations
had very little in-house capacity to analyse development issues for a long time. Having
realised the importance of developing their own capacities, it is only now that many
international organisations have turned their attention to this aspect. The World Bank
realised it only in the 1970s (King, 2000, pp. 172–173; see also Jones, 1991). In general,
projects-based (particularly externally assisted, but also sometimes internally sponsored)
research makes long-term basic research problematic (Court, 1983, pp. 181–84).

Building up a strong knowledge base depends upon how it is used. There are close
links between knowledge and power. Often knowledge is used as a measure of
strengthening the power structures in a society (see Weiler, 2001). As Carlsson (2000,
p. 122) classified them, there are at least five types of uses of knowledge generated by
evaluation studies. They are: instrumental use for operations; conceptual use; legitimisa-
tion of the policies; ritualistic use—symbolic; and finally no use at all: the knowledge
is destined for the bookshelf or dustbin in government and/or aid organisations. Some international aid organisations may be strong in research—but the use of research for actual policy operations could be doubtful. Unabsorbed knowledge is believed to be quite high. In general, the higher the level and intensity of the use of the existing knowledge base for conceptual clarity and instrumental purposes, the higher would be the need for a stronger knowledge base. This would also stimulate demand for building a high quality knowledge base in the long run.

Knowledge is to be widely shared, not only between the governments of the aid-receiving countries and the aid organisations, but also much more widely—among several developing and developed countries and among several aid organisations. It also needs to be shared among the public at large, including professional research and non-governmental organisations and at all levels of government—federal, provincial and local. For this, it is necessary that all research studies, including reports of evaluation and appraisals and information generated in various projects, at least in less sensitive areas like education and social policies, are declassified and are kept in the public domain [4]. Both aid organisations and governments have to realise that this would promote more critical research. The aid organisations can play an important role in promoting such sharing mechanisms through developing networks—inter- and intra-national, regional and global, and even in investing in technology development in this regard for knowledge sharing. For example, the World Bank (1999, p. 137) refers to the African Economic Research Consortium as a successful experiment in capacity building. Its success is also found lying in its ability to offer ‘excellent critiques of the analytical work of the [World] Bank and other international institutions’. Such consortia or networks of research institutions in developing and developed countries are important for capacity building, and international institutions can play an important role in promoting such endeavours. This will also have an important role in reducing the knowledge gap between advanced countries and developing countries and can promote two-way exchange of knowledge—from developing countries to developed countries and back again. After all, the two-way exchange is important. At the same time, even in the increasingly globalised world, whatever be the level of knowledge transfer between the developed and the developing countries, each country has to become an ‘autonomous knowledge society’. There is also a danger in the name of knowledge sharing, of information dumping, much of which can either be useless or influential in promoting a given ideology and methodology.

While international cooperation is very important, developing countries should make serious efforts at developing and strengthening their own research. They can stimulate more critical, objective and socially relevant research, promoting scholarly research in universities and institutions of higher education, developing networks of universities and research institutions within countries and outside, and through sound and meaningful policies of funding research. It has to be noted that the universities and research institutions in the country have the greatest potential of institutionalising knowledge for development (see Brunner, 1991).

Since an effective education system is crucial to building a sound and sustainable knowledge-based society to create quality knowledge, to tap and absorb existing knowledge, and to widely disseminate knowledge within and outside the countries, national governments have an important responsibility of developing and strengthening their education and research institutions, with sound policies of planning and financing. Moreover, developing countries have to note that they cannot tap global knowledge and take advantage of the vast stock of global knowledge unless they develop their own
research organisations that can create knowledge, absorb knowledge and communicate knowledge. After all, the most important aspect of a ‘knowledge society’ lies in its education system. Hence, governments in developing countries have an important role of promoting research in the universities, research institutions and other institutions of higher education. The task becomes more important and tough at the same time, particularly during the periods of economic reforms. It is the governments that have to assume the principal role of creation and development of knowledge, while the aid organisations can help in collation, compilation, and transmission of knowledge—i.e. in knowledge sharing and management. In short, based on the principle of comparative advantage, it may be proposed that knowledge development should be the main responsibility of the governments in developing countries, and knowledge management that of the international organisations.

Summary

The paper describes briefly some of the salient features of the emerging knowledge society, its relationship with education, the role of the international organisations in knowledge development and knowledge management, and specifically the need for knowledge-based aid policies. Though the concept of knowledge society can be traced to ‘literate society’, ‘learning society’, and ‘educated society’, it is also subject to a different and wider interpretation in nature and scope. The nature and trends in the growth of knowledge society are also closely linked to the wider context of globalisation and explosion in technology. ‘Knowledge society’, ‘globalisation’, ‘technology society’ and ‘information technology society’ are closely related to each other; they interact with and reinforce each other.

‘Knowledge society’ has become such a fashionable and attractive buzzword that some countries speak about transforming themselves into knowledge societies overnight, without necessarily paying any attention to the need for the development of strong education systems. As Griliches (2000, p. 88) stated, knowledge is not a free good; it takes effort to develop it, to transfer it and to absorb it. It has to be underscored that knowledge societies cannot be created overnight, nor can they be created by ignoring education systems. It requires special and sustained efforts on the part of the governments. Even in an interdependent globalised world economy, building up of knowledge societies requires strong national systems of education. Strong and vibrant education systems, particularly higher education systems, are critically necessary for the effective creation, dissemination and application of knowledge, as well as capacity building, as the World Bank (2001) noted. It is also important to note that while higher education and research are the agents of knowledge development and dissemination, higher education systems do not stand on their own; they critically depend upon the quality and quantity of school education systems. Hence holistic educational planning, giving due importance to all levels of education, is needed.

International aid organisations have been active in the development of education directly, and thereby in knowledge development indirectly, in developing countries. Some organisations have also initiated efforts that aim at knowledge development and management directly. But the approaches of international organisations for knowledge development and management need to be modified to suit the divergent dynamic socio-economic conditions and national policies. The creation of strong knowledge bases in the developing counties is critically important both for aid-receiving developing countries and the aid organisations as well. The costs of an absent or inadequate
knowledge base are, however, more severe for developing countries. While international cooperation is very important, developing countries should make serious efforts at developing and strengthening their own research. International organisations can stimulate more critical, objective and socially relevant research, promoting research in universities and institutions of higher education, developing networks of universities and research institutions within countries and outside, and through sound and meaningful policies of funding research. It is also argued that given the principle of comparative advantage, governments in developing countries should focus on the development of a strong knowledge base, while aid organisations may help in knowledge management—transmission of knowledge within the countries and outside. Lastly, given that knowledge is a global public good, international organisations need to re-orient their efforts at reducing gaps in knowledge between the developed and the developing countries, and as Kaul et al. (1999) stressed, at wider production and dissemination of international externalities.

Lastly, the paradigms of knowledge management and also knowledge development are rapidly changing. Policies of globalisation and the revolution in information and communications technology have added to the pace of change. The changes and the pace of changes also necessitate developing careful structures that value and promote a local knowledge base, promote more institutional research than research based on consultancy mechanisms, promote long-term research instead of instant research that offers quick fix solutions, that reduce inter-country and intra-country inequalities, and finally the structures and mechanisms that develop and promote sustainable systematic processes of transformation of data into information, and into knowledge that societies can use for development. This is indeed a challenge many developing countries will face in transforming themselves into knowledge societies of the twenty-first century.

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REFERENCES


**TASK FORCE ON HIGHER EDUCATION AND SOCIETY (2000) *Higher Education in Developing Countries: Peril and Promise* (Washington DC, World Bank).**


