



United Nations Educational, Scientific and Cultural Organization.

THE CULTURE OF INNOVATION AND THE BUILDING OF KNOWLEDGE SOCIETIES

- Issue Paper -

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I. The past and present scope of innovation

During the last two decades, the term innovation has emerged as one of the key concepts of academic, societal and political life. Many different actors, ranging from major regional organizations, various national governments, multinational corporations, and universities worldwide, have underscored its importance. Major documents, such as the European Union's *Green Book on Innovation*, published in 1995 and national strategies, such as those formulated and implemented in countries like Singapore, Canada, and Australia, have put the innovation issue relatively high on political agendas. At the same time, we are witnessing a proliferation of committees, institutes and think tanks, both privately and publicly funded, dedicated to the promotion of the concept of innovation. More recently, the European Commission has published a comprehensive study of innovation policies in the six candidate countries and is now in the process of putting in place a Europe-wide common research framework.

All of the above described initiatives rest on three basic assumptions:

Innovation is a national affair

The major driving forces in the formulation of innovation strategies are national governments. Numerous countries have established commissions or committees dealing with the creation of an innovative society.

Innovation is about science and technology

New government programmes increase public spending for scientific research, IT-infrastructure, and efficient patent systems. The state tries to coordinate and foster interactions between the government, universities, and the private sector.

Innovation is primarily an economic concept

Key goals pursued through innovation within the private sector are new ideas, new alliances, and new markets. The main objective of this kind of innovation policy is to formulate proactive strategies designed to create, expand, and maintain systemic competitiveness in the economic field.

In brief, the term innovation can be defined as a “descriptive umbrella notion” covering a series of complex and interrelated economic, governance changes underway in various countries aimed at ensuring systemic and reinforced competitiveness in a global economic environment.

An interesting trend is that a vast majority of highly industrialised countries have set up so-called National Innovation Systems (NISs) in order to analyse and react to technical change. This approach stresses the linkages between actors and institutions involved in science, technology, and

innovation. Supporters of NISs argue that technological change and innovation are fundamental to long-term economic growth and prosperity. Some of these arguments can be traced back to economists like Joseph A. Schumpeter (1883-1950) and Karl Marx (1818-1883). Countries like India, South Africa, and Brazil have joined in, increasingly recognising that the establishment of an innovative environment is a prerequisite of development. The aims of such innovation policies are: to create jobs, to reduce public expenses, to improve efficiency and operational methods, to generate publicity, and to increase the satisfaction of citizens. The basic “principle” of most of the related documentation and reports is that in the 21st century the ability to innovate will separate economic leaders from the rest.

While all of these developments clearly show the growing importance of issues related to innovation, it is necessary at this stage to obtain a more profound and comprehensive understanding of the concept. This endeavour will attempt to take into account the numerous critical voices that have been heard over the last couple of years in order to define a “new” concept of *A Culture of Innovation*.

II. Broadening the concept of innovation: Building Knowledge Societies

A number of organisations and institutions have called for a new orientation and a broader approach to innovation and the creation of *A Culture of Innovation*. They lobby for a better understanding of complex innovation processes, underlining the importance of social and cultural aspects.

First, innovation itself is increasingly interpreted as a highly social and cultural process. At the same time, more and more research focuses on the link between successful innovation and its adaptation within a given society or group. In order to understand people’s ability to innovate and their ability to adapt to change, one has to take into account the social and cultural components of innovation. Our environment - including our belief and value systems - shapes the way we view the world around us and determines how we react to ongoing changes. Technological change has another often overlooked social effect or consequence, namely, it alters social hierarchies and the power structure of groups within society and in some cases society itself.

In the end, these “soft factors” are the tools that enable us to create *A Culture of Innovation*. Past discussions about the relationship between technological change/innovation and society focused almost exclusively on extremes. Believers in so-called “technological determinism” emphasize the exogenous nature of technology, meaning that all technological innovation takes place because of an internal necessity. On the contrary, believers in so-called “social determinism” see technology

as a purely social process. The key to a “new” concept of *A Culture of Innovation* is to achieve a delicate balance between the technical and social nature of innovation processes.

In their report to the Ministry of Research, Science and Technology (MoRST) the Knowledge Policy Research Group of the Humanities Society of New Zealand has emphasized the crucial role of “reflexivity” in the contexts of innovation and of scientific and technological change. Next to managerial expertise and technological competence, the report lists “cultural literacy (the ability to recognise and exploit social, cultural, lifestyle, and ethnic distinctions)” and a reflexive approach to knowledge and practices among the core competencies that are crucial in creating *A Culture of Innovation*. To fully grasp this broader concept of *A Culture of Innovation*, one has to look for a different set of basic assumptions:

Innovation is network oriented (a local, regional, national, and global affair)

One of the main driving forces behind innovation is knowledge, which is not confined by an organization’s boundaries. Instead, it evolves around networks of common practices, experiences and traditions. Innovation calls for new interactions and new partnerships involving different actors from the public and private sector, and civil society organisations (CSO). Because networks characterize a sustainable culture of innovation, activities at a local, regional, national, and international level are always included.

Innovation has a scientific, economic, social, and cultural dimension

In most cases, innovation is the result of recursive and holistic processes and practices and it does not follow linear patterns of progression. Using the analogy of an orchestra playing together, real innovation is normally achieved by a team, “with each member playing a different instrument – bringing something different or unique to the question at hand.”

Innovation is about knowledge

Any concept of *A Culture of Innovation* is strongly linked to the concept of knowledge societies. According to the Dutch Professor Hans Opschoor, innovation essentially implies that creative people who lead economic and social development, put knowledge to work. In any case, innovation is knowledge intensive. Both are interrelated and have to be addressed simultaneously.

Innovation and knowledge creation are people centred

Scientific knowledge and technology can never substitute for social interaction and human capacities. The abilities to learn and to foster personal experiences constitute the human side of *A Culture of Innovation* and are key elements of knowledge societies. Therefore, all innovation and knowledge policies have to be people centred.

Innovation and knowledge creation have long term perspectives

In the past, policy makers have placed too much emphasis on short-term gains in the name of global competition. *A Culture of Innovation*, with the features of a knowledge society, can only be created based on a clear and concise strategic perspective. This strategic process ideally rests on the principles of democratic governance and inclusiveness.

Knowledge creation and *A Culture of Innovation* are keys to development

Research has shown that increased investment in human capital can determine competitive advantage and indeed success in the development of Least Developed Countries (LDCs). With the increasing importance of Information and Communication Technologies, (ICTs), the digital divide has grown at a rapid pace. It is important to bridge this gap by fostering LDC's access to ICTs in order to make technological progress work for human development.

Innovation and knowledge creation are inseparably linked with education

The radical social transformations implied in the development of knowledge societies and *A Culture of Innovation* mean that the global population is increasingly in need of the necessary education to harness and maximise the potential benefits while minimising risks of globalisation and innovation. As it becomes more and more important to know, the importance of “knowing how to know” also arises. As knowledge becomes the essential factor in development, both personal and economic, it is of capital importance to increase access to education.

The international community committed itself to increase access to education on the 2000 World Education Forum with the adoption of the so-called Dakar goals. UNESCO, as the coordinator of Education for All (EFA), has made the promotion of education as a fundamental right, the improvement of the quality of education and the stimulation of innovation and the sharing of knowledge and best practices one of its priorities.

It has now become clear that the creation of *A Culture of Innovation* does not allow for a standard procedure to be followed at all times and in every situation. As modern social scientists have argued, culture, innovation, and knowledge are highly “contextual.” Only a unique mix of actions and measures together with a serious effort to continue the learning process can ensure a positive and truly innovative outcome.

This “new” concept of *A Culture of Innovation* thus calls for new interactions and partnerships involving different actors from the public sector, the private sector, and civil society at all levels.

The process of innovation has to be recognized as a process of a multifaceted nature that can only be established in the long term.

III. UNESCO's past and present activities

UNESCO has been involved for a long time in the development of various concepts of, and approaches to, innovation in education, science, and culture. The most recent initiative was an international round table on "Science, Technology and Innovation Policy: A parliamentary perspective" co-organized by UNESCO and the Committee for the Future of the Parliament of Finland, in January 2003.

In the past, UNESCO has also been active in debates concerning knowledge societies and in the establishment and functioning of networks. In striving to meet the commitments of the Dakar World Education Forum, the organisation has been one of the first and most active promoters of the development of sustainable knowledge societies, identifying potential threats to, and opportunities for, their implementation. Indeed, one of the cross-cutting themes in UNESCO's Medium Term Strategy (31 c/4) for the years 2002 to 2007 is centered around the contribution of ICTs to development and the construction of knowledge societies. An example in this field is the development of appropriate normative instruments, such as the "draft recommendation on the promotion and use of multilingualism and universal access to cyberspace" which will be presented to the General Conference in 2003.

At the same time, UNESCO serves as a forum for intellectual and ethical debate. These processes of dialogue will feed into the first UNESCO World Report, on 'Building Knowledge Societies' that will be published in 2003. These debates will also be the focus of a number of conferences and seminars, in particular the World Summit on The Information Society that will take place in 2003 and 2005. In preparation for the Summit UNESCO has published a series of books dealing with crucial issues for building knowledge societies, such as the digital divide which increases the development gap, free circulation and equal access to data, information and to good practices and the knowledge of information societies, and the development of norms and principles based on an international consensus. In a similar vein, UNESCO is encouraging community-based approaches and local action. This means directing assistance towards those members of civil society who are most in need, notably women and youth, so that they can acquire the knowledge, skills and training they presently lack.

Other examples of UNESCO's activities include the publication in March 2002 of its "International Social Science Journal". The journal focuses on knowledge societies, the construction of a clearing house/knowledge base, research and best practices related to the use of ICTs, the development of

virtual libraries, such as the Nigerian Virtual Library for Universities and Institutions of Higher Learning and the development of a multidisciplinary UNESCO portal with several sub-portals.

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The 21st century has only just begun, yet national governments and international organisations are already asking themselves how to adapt to a world that is changing faster and more profoundly than ever before. The times of standard answers to standard problems are irrevocably over. Instead, we should be searching for more comprehensive and flexible frameworks and mechanisms, thus leaving enough room for case-by-case adaptations.

By its *Culture of Innovation* and the creation of knowledge societies, UNESCO proposes a flexible mechanism that could on the one hand, help to set up guidelines for national governments, civil society organisations and the private sector, and, on the other hand, enable individuals to deal with innovation processes and the creation of knowledge.