

## Forum

# E-Skills: Who Made That Big Dent in My Flat World?\*

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In a large measure, e-skills remain a missing link in the emerging socio-economic fabric of knowledge societies. In most advanced countries, as well as in large emerging economies such as India and China, the ICT sector, many service and manufacturing industries, and governments are already feeling the lack of sufficient “e-skilled” labor. On the other hand, this imbalance presents an opportunity for involving a greater share of the world population in creating, and benefiting from, a truly inclusive information society.

To seize this opportunity, a qualitatively new level of leadership will be required from industry and government. Rather than a thorough knowledge of technology, the critical quality of “e-leaders” in the knowledge economy will be a deep understanding of the organizational, political, and social impact of global information networks.

In mature economies, fresh efforts are required to generate and attract more e-skills, and to direct interest toward IT careers. Such efforts, however, will not be successful unless they involve all major stakeholders (business, academia, government, and civil society).

## Growing Worldwide Demand for E-skills

As global competition becomes highly knowledge-centric, skills related to the specific requirements of information-intensive societies (e-skills) are increasingly strategic. Research shows that, increasingly, e-skills are the entry ticket to better jobs and to employment in general. Correspondingly, they have become a key not only to digital but also to social inclusion.

Yet the very definition of e-skills is rapidly challenged by the expanding scope and purpose of such skills. This is because the rapid mutation of societies from industrial and service economies to knowledge economies makes these skills both more pervasive and more encompassing.

Existing literature (e.g., [www.e-skills.com/](http://www.e-skills.com/)) broadly defines *e-skills* as ICT-related skills. For instance, the 2004 European e-Skills Forum (e-Skills for the 21st Century) put forward definitions for three types of skills:

1. *ICT user skills*, required for effective application of ICT systems and devices by the individual;
2. *ICT practitioner skills*, required for researching, developing and designing, managing, producing, consulting, marketing and selling, integrating, installing and administering, maintaining, supporting, and servicing ICT systems; and
3. *E-business skills*, needed to exploit opportunities provided by ICT, notably the Internet, to ensure more efficient and effective perfor-

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\*This article is largely based on *Building E-skills for the Information Age* by Bruno Lanvin and Pamela Passman (in *Global Information Technology Report, 2007–2008, World Economic Forum/INSEAD, April 2008*).

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mance of different types of organizations, to explore possibilities for new ways of conducting business and organizational processes, and to establish new businesses.

E-skills have become pervasive and are not limited to IT specialists. They are increasingly required in all sectors and at all levels of activity in which creativity, innovation, and interdisciplinary teamwork are required as tools for competitiveness. In addition, the emerging global knowledge economy will significantly increase the need for more e-skills at all levels (from unspecialized workers to corporate leaders), in all industries (not just the ICT sector), and in the public sector.

In nearly all contexts, e-skills are treated as a component of broader strategies toward building sustainable knowledge economies by fostering competitiveness, growth, employment, education (including lifelong learning), and social inclusion. Therefore, the integrated approach to e-skills, which has been championed by institutions such as the European Council, emphasizes social cohesion, gender issues (that include encouraging women to choose ICT careers), e-inclusion, and the promotion of new ICT professions and skills (Council Conclusions, 2002).

### The E-skills Leadership Challenge

Traditional top-down organizational models are no longer efficient in the newly emerging e-skills space. To drive multicultural (and often geographically dispersed) teams and to attract talents from afar, new qualities are required from leaders in industry and government. Moreover, since such teams have to be managed in ways that will stimulate their creativity and enhance their ability to innovate, traditional top-down organizational models are not the most efficient. A thorough knowledge of technology will not be the main characteristic of the “e-leaders” required by knowledge economies; on the contrary, a deep understanding of the organizational, political, and social impact of global information networks will be a critical quality of this digital leadership. E-leaders will also be expected to understand the pervasive application of technology to organizational processes and how to turn innovation into productivity gains. (Lanvin, 2005).

In parallel, efforts to redefine the roles, profiles, and functions of the chief information officer (CIO),

whose role is becoming increasingly strategic and less technology-specific, have already been in place for some time. Organizations in which CIOs have high levels of strategic involvement demonstrate higher levels of business model and product and service innovation, as well as shared, centralized IT services. If one defines CIO skills as part of e-skills, then e-skills for the future encompass much more than IT skills.

### Engaging All Stakeholders in the E-skills Cause

The e-skills requirements presented by knowledge-intensive economies have highlighted a growing gap in the ability of existing educational systems to produce e-skilled workers and managers. This is hardly surprising. When socioeconomic change accelerates, educational systems prove comparatively slow to react and adapt. Typically, changes made in the primary/secondary educational systems will make their effect felt on job markets only 10 to 20 years later; for tertiary education, the lag is about five to 10 years.

As in other aspects of developing knowledge societies, the mobilization of all categories of stakeholders around a set of common objectives is a key condition for narrowing the e-skills gap. (A possible multi-stakeholder approach to e-skills, created by INSEAD, is illustrated in Figure 1.) This, however, is unlikely to happen as a result of a national decree or of an international conference. Someone needs to take the lead (and the risks) and show the way. In different parts of the world, initiatives that offer more than a glimmer of hope have started to coalesce. In the European Union, for example, the private sector, including leader companies such as Microsoft, has been working side by side with EU institutions and national governments to facilitate diagnostics, raise awareness, and formulate concrete action plans to mobilize all available forces in favor of a rapid development of e-skills, notably through the creation of the “E-Skills Industry Leadership Board,” founded in June 2007.

On a practical level, adjustments are urgently needed to adapt educational systems—not only in schools and universities, but also through distance learning and lifelong education—to address medium-term e-skills needs. Efforts to improve the image and career prospects of IT jobs, especially

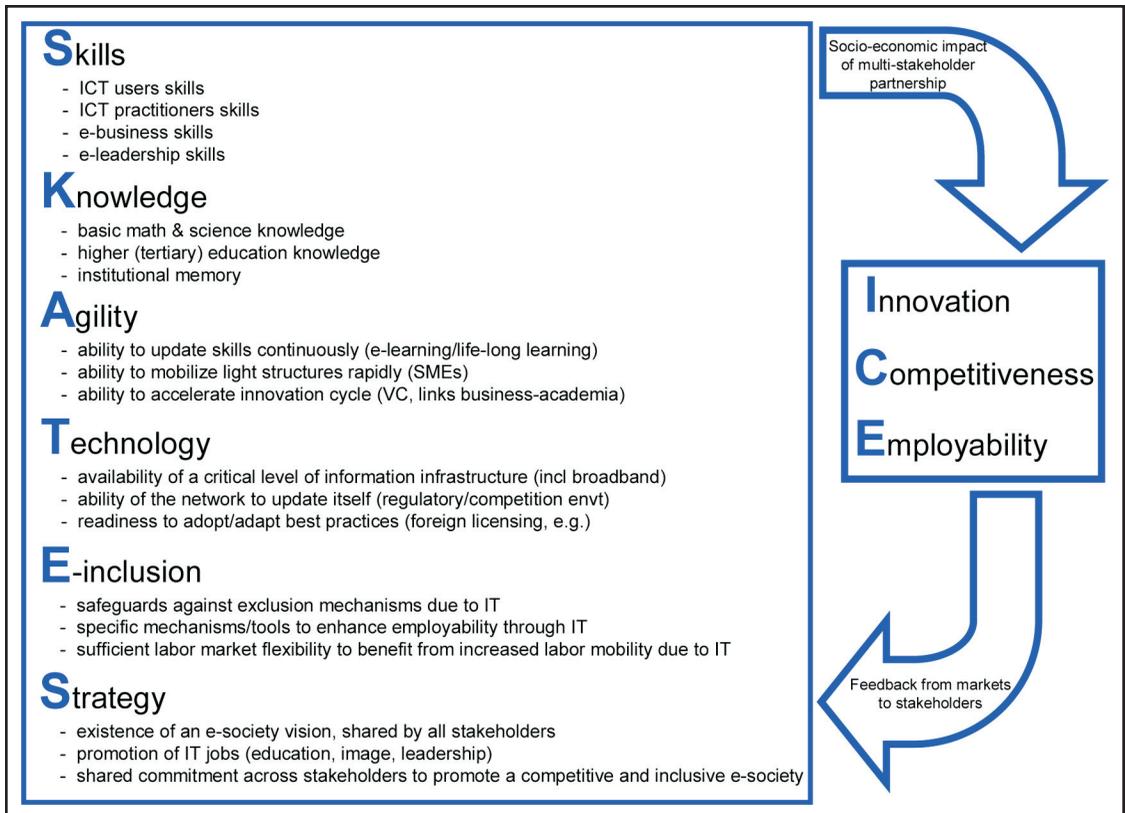


Figure 1. E-skills created by INSEAD.

among women, will be required to enhance the impact of such adjustments. In the short term, legal and regulatory systems will have a crucial role to play to improve the functioning of labor markets, including through allowing greater upward and horizontal mobility for e-skilled workers. Industries and regions with the more urgent needs will have to consider ways to improve their access to foreign e-skills and talents, for which competition will become increasingly more intense in the next few years. ■

## References

*Council Conclusions on ICT and E-business Skills in Europe.* (2002, December 5–6). Available at <http://ec.europa.eu/enterprise/ict/policy/doc/cou-concl-dec-2002/eskills.pdf> and [http://ec.europa.eu/enterprise/ict/policy/ict-skills/ict-skills\\_en.htm#introduction](http://ec.europa.eu/enterprise/ict/policy/ict-skills/ict-skills_en.htm#introduction)

*E-Skills for the 21st Century: Fostering Competitiveness, Growth and Jobs.* Communication from the

Commission to the Council, The European Parliament, The European Economic and Social Committee and the Committee of the Regions.

Lanvin, B. (2005). *The Elusive Quest for E-Leadership.* In R. Schware (Ed.), *E-Development: From Excitement to Effectiveness.* Washington, DC: World Bank.

Lanvin, B., & Passman, P. (2008, April). *Building E-skills for the Information Age.* In *Global Information Technology Report, 2007–2008.* World Economic Forum/INSEAD: Geneva.

## Suggested Reading

Frinking, E., Ligtoet, A., Lundin, P., & Oortwijn, W. (2005, September). *The Supply and Demand of e-Skills in Europe.* Prepared for the European Commission and the European e-Skills Forum, Thessaloniki, Greece. Available at <http://ec.europa.eu/enterprise/ict/policy/doc/eskills-2005-10-11.rand.pdf>

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E-Skills Industry Leadership Board. (2007). Available at [www.e-skills-ilb.org](http://www.e-skills-ilb.org)

Liebenau, J. (2007). Innovation Trends: Prioritising Emerging Technologies Shaping the UK to 2017. Economics Occasional Papers No. 8. London: UK Department of Trade and Industry.