Education and training systems are core to innovation and productivity

OECD assessments show that on average, only one-third of all adults have the skills necessary for a technology-rich environment (Figure 1). Beyond subject-specific expertise, education should also develop students’ creativity, critical thinking, entrepreneurship and communication skills. Doing so ultimately depends on pedagogical approaches and the design of curricula. Many disciplines are relevant. A key principle should be the creation of an environment that enables individuals to choose and acquire appropriate skills and supports the optimal use of these skills at work. The OECD’s 2013 Skills Strategy sets out a comprehensive approach to develop skills and put them to best use.

In the workplace, possible policy avenues to support firm-level training include improving information about training opportunities, setting legal frameworks so that private parties can organise and finance their training (e.g. through contracts), and increasing the portability of skills by improving information on the competencies and skills that are gained through various learning channels. Reinforcing public funding of vocational education and training, and tax incentives to promote training, can be used as supplementary measures. However, policy measures must take into account the implications that the "poaching" of workers subsequent to training has for firms' willingness to undertake such investments.

Figure 1. Top adult performers in problem solving in technology-rich environments, % of 16-65-year-old adults
Optimising the use of available skills

On average across countries, roughly one-third of workers report a mismatch between their existing skills and those required for their job, implying they are either over- or under-skilled. This mismatch also represents a barrier to the growth of innovative firms. Making the most of the available skills in the economy requires reforms to policies that restrict worker mobility, and funding for lifelong learning.

Women must also have equal opportunities to contribute to innovation. Governments should strive to ensure that barriers to women’s participation in science, innovation and entrepreneurship are removed. Gender stereotypes and non-transparent nomination and appointment procedures can all hinder female involvement. Showcasing successful women in science and technology, and in high-growth firms, can provide useful role models for young women who may not otherwise consider such fields. Removing gender biases and fostering the participation of women is not only important for equality, but can also improve research and innovation itself.

Policy should also facilitate the development of linkages and networks among researchers and innovators across countries. The knowledge embodied in people is the object of strong global competition, but OECD research shows that knowledge flows across countries are circular. Policies should therefore not be based on a view that international mobility entails zero-sum competition. Collaboration between countries often results in better outcomes. A key consideration is that migration regimes for the highly skilled should be efficient, transparent and simple, enabling movement on a short-term basis.

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