



Job skills: Lessons from recent World Bank flagship studies

Countries in all regions of the developing world are asking for advice and support on how to make their labor force more employable and productive. Skills development is part of the answer. Finding the right answer requires a clear identification of skills gaps and entry points to build them—from investments in foundational skills early in life to technical skills acquired on-the job. Labor market institutions and policies create incentives that influence both supply and demand for skills. Policies for skills development must consider carefully the right role for the state—one that responds both to market and government failures. **Ariel Fiszbein, Human Development Network, Chief Economist** reviews key messages emerging from recent World Bank flagship studies.

Skills, and skills development, are increasingly recognized as critical to improving employment and productivity in low, middle and high income countries. The World Bank's enterprise surveys show that between 20 percent and 40 percent of firms in most developing regions identify the lack of appropriate labor skills as a major constraint to development. Government leaders around the world agree: Indian Prime Minister Manmohan Singh called skills and knowledge “the driving forces of economic growth and social development in any country.”¹ U.S. President Barack Obama linked America's ability to be competitive in the global economy with its ability to ensure that workers have opportunities to gain new skills.²

Governments are doing more than just talking. They are matching their words with programs to train large numbers of people. For example, the National Skills Development Corporation in India was set up to achieve the goal of developing skills of 150 million people by 2022. China plans to build 1200 technical training centers and train 3.5 million technical workers and one million senior technicians in the next 10 years.

Countries in all regions are asking for advice and support on *how to make their labor force more employable and productive*. The ‘jobs’ agenda involves a range of issues, including how to improve the investment climate and other means of increasing the demand for labor more broadly. Skills development is often an important aspect of that agenda. A recent set of World Bank regional studies focus on this critical question and provide some valuable lessons.

Lesson 1: Many skills, diverse gaps

There are different types of skills that matter for employment and productivity: *problem-solving skills* or the capacity to think critically and analyze; *learning (foundational) skills* or the ability to acquire new knowledge (“learning to learn”), distill lessons from experience and apply them in search of innovations; *communication skills*, including reading and writing, collecting and using information to communicate with others, and using a foreign language and information and communication technologies (ICTs) as communication tools; *personal skills* for self-management, making sound judg-

ment, managing risks, etc.; and *social skills* to collaborate with and motivate others in a team, manage client relations, exercise leadership, resolve conflict, develop social networks, etc. These also provide the basis for developing and using specific technical and managerial skills.

As countries become richer and move up the value-added chain, the types of skills demanded change, often with growing demands for high-level cognitive skills (such as analysis, problem solving and communication).

Understanding the skills gaps experienced by different groups of countries, firms and individuals is key.

- In Latin America, the occupational pattern of job expansion has been biased toward traditional cognitive skills rather than the higher order, ‘new economy skills’ (see figure 1). The fact that those firms that tend to demand the new economy skills have difficulty in recruiting staff (as shown by enterprise surveys) suggests that the supply of high order skills may be constrained in these countries in spite of the expansion in education coverage that they have achieved.
- In Africa basic and foundational skills typically acquired in school are low, almost across the board. Data from the PASEC test indicated that in several countries more than a third of Grade 5 test-takers perform at a level less than what would result from random guessing when answering questions (see Figure 2).
- In India³ employers hiring fresh engineering graduates indicate they are only somewhat satisfied with graduates’ specific knowledge and technical skills, behavioral skills (such as teamwork, reliability, leadership, and willingness to learn) as well as communication skills.
- In East Asia, data from recent employer and employee surveys show significant weaknesses in thinking and behavioral skills, in particular in the export-oriented sectors.
- In the Middle East and North Africa, while important progress has been made in increasing access to education, quality and relevant skills are still scarce. With the exception of Lebanon and Jordan, achievement in mathematics of 8th graders in MENA countries is lower than in most participating countries with similar levels of development as measured by GDP per capita. For some countries, the performance in the international math and science study TIMSS even worsened between 2003 and 2006.
- In Europe and Central Asia, a region that has long been characterized by high rates of schooling, a significant share of young people fails to acquire even the most basic skills. The PISA 2009 data indicates that in several countries a majority of 15 year olds perform at level 1 or below in reading (which means they will not have the reading skills to acquire other skills) and in most countries more than 20% of the students perform at that level (see Figure 3). There are strong indications that while education systems in these countries may be adept at imparting basic skills at the primary level, they may be failing at imparting higher order skills.

Defining policies and designing programs for skills development without good information on these gaps is, for all practical purposes, acting blindly. Measurement of existing skills—or their absence—is an essential part of successfully promoting productivity and growth.

To support this important agenda, the World Bank has launched the STEP Skills Measurement project, a multi-country research effort that seeks to document the skills education and labor market history of the working-age population in comparable ways and to deepen the understanding of skills mismatches and linkages between skills and labor market outcomes. The project is the first-ever systematic attempt to fill the knowledge gaps regarding the supply of and demand for cognitive, behavioral (often also called non-cognitive) and technical skills through household and employer surveys. The household-based survey collects general information on household characteristics and detailed information on paths to skills accumulation, skills proficiency and labor market trajectory for one randomly selected member of the household.

A unique feature of the household survey is the inclusion of a test of reading literacy that is on the same scale as the Program for the International Assessment of Adult Competencies (PIAAC) sponsored by the OECD. This will allow for direct measurement of reading literacy in the working age population and comparability with PIAAC/OECD results. Equally important, the survey measures behavioral skills in a robust and systematic way allowing for cross-country comparisons. The employer survey gathers information on hiring, compensation and termination practices, training approaches and enterprise productivity and provides a stronger basis for the analysis of skills than traditional enterprise surveys.

Lesson 2: Multiple entry points

Skills can be acquired in different ways. Schools play an essential role by providing quality education that sets the bases for not only cognitive but the whole range of skills that matter for employment and productivity later in life. Formal training, either through higher education institutions or through a variety of training programs, constitutes an important avenue through which adults (young and otherwise) can enhance their skills and often complement skills acquisition on the job. But the efficacy of schooling and training is heavily influenced by individuals' early years. Behavioral skills needed for higher productivity jobs, built through learning from families and schools, are difficult to impart later in life. The ability to acquire skills such as creativity and entrepreneurship critically depends on the amount and quality of stimulation and education received in childhood. As a result, workers who have poor early childhood environments or inadequate or insufficient basic education will be less able to flexibly acquire the higher level skills employers need and are less likely to be employable or fully productive.

Understanding the performance of the various mechanisms through which individuals acquire skills (and the bottlenecks experienced by the relevant institutions) is another key aspect of the findings of the studies. For example:

- In South Asia weaknesses in the quantity and quality of investments in human capital early in life may be having dramatic negative effects

Figure 1: Comparing skills distributions in Brazil, Costa Rica and Nicaragua with the US

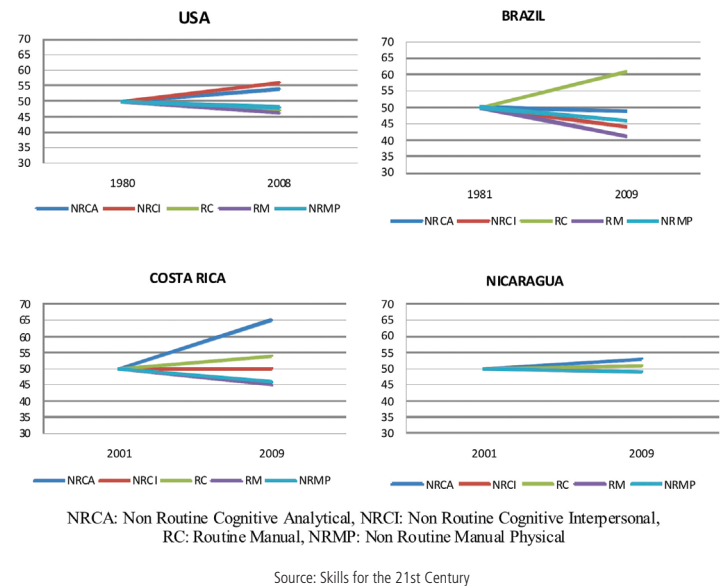
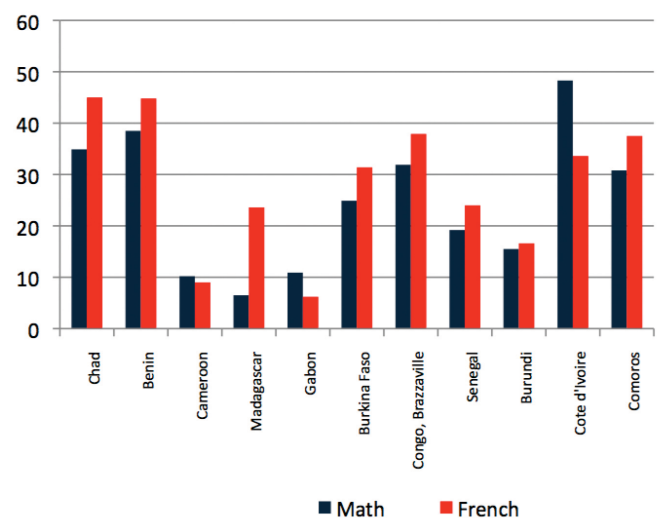
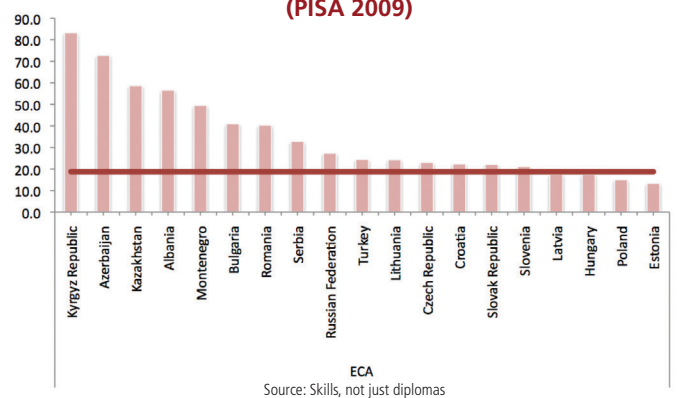


Figure 2: Percent of PASEC Grade 5 test-takers who perform at a level less than random guessing



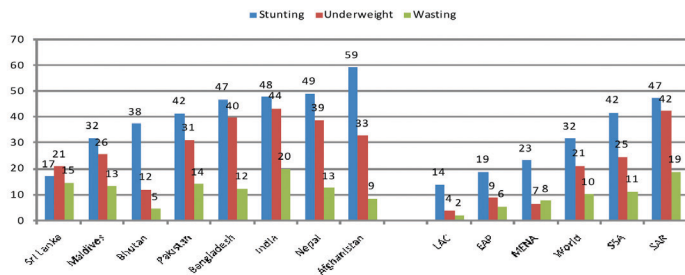
Source: COMFEMEN
"Synthese des Resultats PASEC VII, VIII et IX" • http://www.confemem.org/IMG/pdf/Synthese_PASEC_VII-VIII-IX_final.pdf

Figure 3: Share of students scoring Level 1 or below on reading (PISA 2009)



on productivity of adults. Just to name the most extreme example, South Asia has the worst child malnutrition indicators among all regions (see Figure 4). As a result, a large share of children in South Asia start school with significantly impaired cognitive development. It is highly unlikely that such impairments can be repaired easily through schooling or training later in life. Weaknesses in mechanisms supporting early child nutrition and development —many of them informal and operating through families and communities—may be a key bottleneck for skills development in this context.

Figure 4: Percentage of children under five with malnutrition by region and country



Source: More and Better Jobs in South Asia

Figure 5: Skills toward employment and productivity.



Source: Stepping up skills
<http://go.worldbank.org/LSCAAJ890>

- Adult training programs remain very poorly developed in most countries in Europe and Central Asia. Data from Business Environment and Enterprise Performance Surveys show that in many countries, only a small fraction of firms offer training opportunities to workers. Moreover, in countries in which a larger share of firms offers such opportunities, relatively few workers participate and they do so for few hours.
- In East Asia there is a disconnect between the skills supplied by higher education and labor market demands. For example, low enrollment rates in science, technology, engineering and math (the so-called STEM fields) have been identified as bottlenecks for manufacturing in countries like Cambodia and Mongolia. Weak incentives for public universities to respond to market demands may explain the observed disconnects.
- In the Middle East and North Africa, relevant and quality skills continue to be scarce. The region has the highest percentage in the world of firms reporting that inadequate labor force skills are an obstacle to growth. At the same time, firms offer little training to their workers, probably because their low exposure to competition provides few incentives to do so. With limited demand, and voice, from the private sector, and a long history of state-led industrialization, the main focus of the education system continues to be the production of future employees for the public sector.

The multiplicity of means by which skills are acquired, and the links between them, requires a comprehensive review of how well different institutions and mechanisms operate throughout the life time of an individual. This recognition lies at the basis of Skills Toward Employment and Productivity (STEP), a conceptual framework the Bank developed to help policymakers and researchers design systems to boost skills to enhance productivity and growth (See Figure 5). Pulling together what is known about the elements of a successful skills development strategy, it can guide the preparation of diagnostic work on skills, and subsequently the design of policies across sectors to create productive employment and promote economic growth.

Thinking comprehensively (by looking at the various steps), and *acting strategically* (by focusing on the areas of poor performance) constitute a pragmatic approach to addressing skills development challenges. Benchmarking country performance, through international comparisons, provides powerful means to identify the areas in more need of change. The Systems Approach for Better Education Results (SABER) initiative is a powerful means to generate comparable assessments of quality of policies in key areas (from early childhood development to workforce development and higher education) of relevance for skills development.

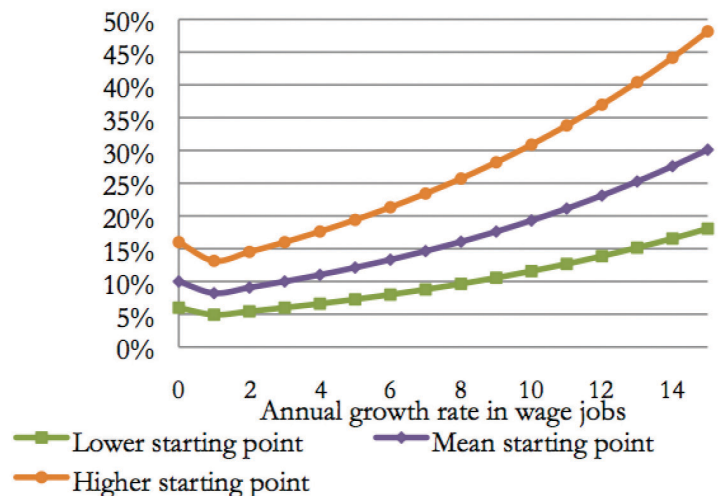
Lesson 3: Labor markets and skills development

How labor markets work, and the regulations that affect them, can influence greatly the incentives and motivation for individuals and firms to invest in the right skills. So can social protection policies. Employers need the flexibility to manage their human resources. Workers need to move freely between jobs and regions. Entrepreneurs (including the large number of self-employed workers in many developing countries) need some form of managing the risks associated with innovation. And employers have to find the skills they need, and workers the jobs that put their skills to best use. In all these regards, policies and institutions influencing job mobility and income protection can be important factors influencing both the demand for skills and the transformation of skills into actual employment and productivity.

Understanding the labor market and the effects on the demand for skills is an important aspect in several of the studies. For example:

- In Africa, family farms and the informal sector represent over 80% of total employment in most countries. Projections under various growth hypotheses indicate this will remain the pattern for years to come (see Figure 6). Even such a simple consideration of labor market trends suggests that a traditional focus on TVET, for example, or fiscal incentives for on-the-job training cannot be the principal response to improving the productivity of labor in Africa.
- In Latin America, an analysis of labor market trends during the 2000s indicates that the overall reduction in wage skill premiums was predominantly the result of a slowing down in the demand for skilled labor in the context of an expanding supply. This trend reversed a previous environment in which skills shortages drove returns to higher education up, constraining profitability and growth. Improvements in real minimum wages in several countries contributed to the reduction in skills premiums at the secondary education level by driving up wages at the lower end of the distribution. This is in contrast to the trend in wage premia observed in South Asia where the premia are increasing at higher levels of education, suggesting the increases in demand at these levels have been outpacing the increases in workers with upper secondary and/or tertiary education.
- In the Middle East and North Africa, labor market intermediation systems are underdeveloped, with large shares of workers finding jobs through personal connections rather than through market-based processes. This

Figure 6: Africa: The share of labor force in private wage jobs in 10 years



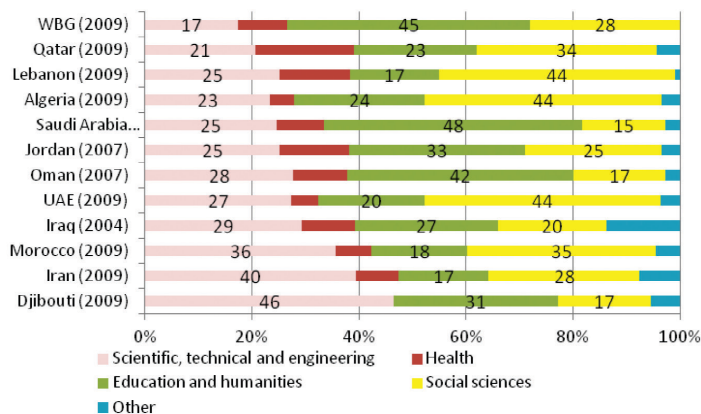
Source: Household Enterprise in Sub-Saharan Africa

is consistent with the behavior of a dual private sector, where well established firms operate in a limited competition regime and small and micro firms strive to survive. The first do not face market incentives to hire according to productivity, the latter hardly the scale to attract top talent. At the same time, the public sector offers a desirable employment package, and therefore it continues to be the employer of choice for the large majority of young people. As a result, skills formation is also distorted and students have incentives to choose degrees that are not necessarily responsive to labor market needs but that instead secure a diploma.

In some countries the nature of labor market institutions and policies could have overwhelming effects on the ability of even

well designed and generously funded education and training programs to be effective, turning well intentioned efforts futile. **Combining skills analysis with labor market analysis** can help in avoiding such mistakes. Such analyses may show that, in some cases, labor market policies, such as regulations, and programs, such as the provision of information and other labor market intermediation initiatives, may be the more relevant than traditional training programs as a way of promoting skills development.

Figure 7: MENA: Distribution of university students by field of study



Source: Edstats
<http://go.worldbank.org/ITABCOGIV1>

Lesson 4: State roles in skills development

The well known presence of market failures (e.g. credit market imperfections, externalities of different types)

provides an ex-ante case for government intervention in the area of skills development. But, very often, skills development systems are plagued by government failures as well: inefficiencies,

rent-seeking, corruption. Regardless of the source of the problem, low quality government provision of education and training services—and few options to choose among providers—depresses demand for such services, and contributes to the observed low levels of skills.

Governance reforms (understood as changes in incentives to providers and strengthening of accountability mechanisms) are often a priority to improve the effectiveness of public policies for skills development, including those enabling a role for the private sector. For example:

- In Europe and Central Asia, the legacy of highly centralized management makes it difficult to improve the performance of education systems. A focus on ‘norm compliance’ instead of ‘performance monitoring’ may be creating the wrong incentives. This often manifests itself in large variations in spending across local governments, unrelated to student performance. A combination of school autonomy/accountability and performance-based financing may, in this context, provide a stronger environment for the performance of education systems.
- In East Asia, improving the performance of universities as providers of skills needed for innovation and growth will require a combination of more autonomy (so that higher education institutions have the flexibility to adjust programs, for example) and stronger accountability for results.

- In South Asia, developing a better system for skills development at the tertiary education and pre-employment training level will require a set of governance reforms including strengthening quality assurance and accreditation, increasing the role of private sector and employers, increasing autonomy of institutions and strengthening financial incentives for improved performance.
- In the Middle East and North Africa, the challenge of expanding job creation will require governance reforms in a number of areas, primarily focused on creating a level playing field for firms to grow through increased competition. To produce the skills set necessary to sustain this new dynamic economy, education and training systems will need to increasingly focus on quality and relevance of skills, through better and more systematic measurement of results and increased involvement of the relevant stakeholder, including parents and the private sector.

As is often the case, governance reforms are highly political. The changes that are needed may hurt vested interests: un-accountable bureaucracies, special interests, etc. As a result, it is important to acknowledge that in this field, the drivers of change may sometimes reside outside the public sector. Business, professional organizations, civil society are potentially important actors both in initiating and implementing reforms (see Box 1 for an example). Strategic engagement with those actors can help strengthen their ability to influence policy making. In the face of dysfunctional government institutions, an indirect approach to **building demand for change** may be the right approach.

Generating evidence on program effectiveness, for example through impact evaluations, is an important way in which debate and discussions at the country level can be fostered. The World Bank is investing heavily in generating such evidence, as illustrated in Box 2. Increased transparency, through the systematic disclosure of system and institutional performance metrics (graduation rates, academic performance, labor market outcomes, etc) is another way in which demand for change can be built.

Box 1: A Role for Civil Society

Nongovernmental organizations in Romania worked together to monitor public universities and assess and establish guidelines for academic integrity (good governance). Their report, issued in 2009, had three major findings that pointed to problems in governance, accountability and transparency: 1) Increased tolerance for plagiarism 2) Evidence of extended nepotism and 3) Lack of transparency in decision making and the academic process. **In response, the government introduced a new law on education in 2011, which restricted the administrative, financial, and staffing autonomy of universities. The law also included measures to strengthen accountability for performance.**

“Skills, Not Just Diplomas, Managing Education for Results in Eastern Europe and Central Asia” (World Bank Publications) http://siteresources.worldbank.org/ECAEXT/Resources/101411_FullReport.pdf

Box 2: The Evidence

Two impact evaluations recently showcased in the Bank’s *Evidence to Policy* series, provide good examples of the new evidence on effective programs to promote skills development.

1. Offering vouchers to young adults to cover the costs of vocational training programs can result in an increase in uptake for vocational training programs. An initial evaluation of a program in Kenya showed that vouchers—especially when private sector schools are included—can be an effective way to give job seekers employable skills.

“Vocational Education Voucher Delivery and Labor Market Returns: A Randomized Evaluation Among Kenyan Youth,” by Joan Hamory Hicks, Michael Kremer, Isaac Mbiti and Edward Miguel.

2. Giving young men and women cash grants to start new businesses or get training can be effective. Based on mid-term results two years into the evaluation, a program in Uganda made significant impacts: Beneficiaries reported large increases in skilled employment and incomes. In the constrained credit markets of many developing countries, this impact evaluation shows that in certain circumstances, unsupervised cash grants may be used successfully with poor entrepreneurs.

“Employment Generation in Rural Africa: Mid-term Results from an Experimental Evaluation of the Youth Opportunities Program in Northern Uganda.” Christopher Blattman, Nathan Fiala, and Sebastian Martinez.

Conclusions

The answer to the challenge of preparing the labor force to be employable and productive will vary across countries: there is no ‘one-size-fits-all’ response. The analytical and measurement tools to diagnose gaps and problems exist. There is a growing body of evidence on effective approaches to skills development that can help inform policy—with the necessary adaptation to local conditions. Information on skills gaps and program performance can play a transformative role supporting evidence-based policy innovation—as well as creating awareness and demand for change.

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¹ <http://indiacurrentaffairs.org/skills-and-knowledge-driving-forces-for-economic-growth-and-social-development-dr-manmohan-singh/>

² <http://www.whitehouse.gov/the-press-office/2011/06/08/president-obama-and-skills-americas-future-partners-announce-initiatives>

³ Blom and Saeki (2011)



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