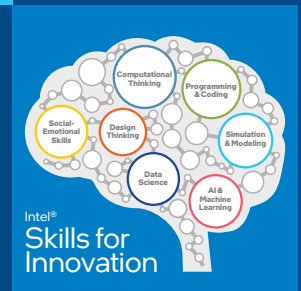


# Intel® Skills for Innovation Framework



## A framework to transform education to empower students to become the next generation of innovators

Future job markets will need more cognitive, social-emotional, and technological skills.<sup>1</sup>

Skills	% Change in hours worked by 2030 (US and Western Europe)
Physical and manual skills	▼ 11%+
Basic cognitive skills	▼ 14%+
Higher cognitive skills	▲ 7%+
Social and emotional skills	▲ 22%+
Technological skills	▲ 52%+

### The Jobs Landscape in 2025<sup>2</sup>

**85 Million**  
Declining roles, global change by 2025

- 01 Data Entry Clerks
- 02 Administrative & Executive Secretaries
- 03 Accounting, Bookkeeping & Payroll Clerks
- 04 Accountants & Auditors
- 05 Assembly & Factory Workers
- 06 Business Services & Administration Managers
- 07 Client Information & Customer Service Workers
- 08 General & Operations Managers
- 09 Mechanics & Machinery Repairers
- 10 Material-Recording & Stock-Keeping Clerks

**97 Million**  
Emerging roles, global change by 2025

- 01 Data Analysts & Scientists
- 02 AI & Machine Learning Specialists
- 03 Big Data Specialists
- 04 Digital Marketing & Strategy Specialists
- 05 Process Automation Specialists
- 06 Business Development Professionals
- 07 Digital Transformation Specialists
- 08 Information Security Analysts
- 09 Software & Applications Developers
- 10 Internet of Things Specialists

## Education Systems Have Reached an Inflection Point

The Fourth Industrial Revolution has integrated digital technology into every aspect of our lives. As a result, the competencies required for success in the global workforce are being redefined. Workplaces today demand that workers come prepared with new ways of thinking and solving problems. Education leaders are seeking to foster future-ready technology skills in ways that feel as natural to students as learning math and language skills.

Additionally, the COVID-19 pandemic has dramatically accelerated technology use around the world. A variety of classroom-, remote-, hybrid-, and blended-learning environments are being deployed, each with unique challenges. The experience has brought into sharp focus the need for built-in, long-term, resilient systems, as chronicled by a recent [UNESCO International Bureau of Education](#) report.<sup>3</sup> These moves toward greater access, flexibility, robustness, and equity are a good start, yet most of them happened without much foresight and need closer integration of technology into a future-ready education system.

As workplace requirements shift, employers, governments, and their citizens are calling for education systems—and the way they use technology—to better prepare students for the future.

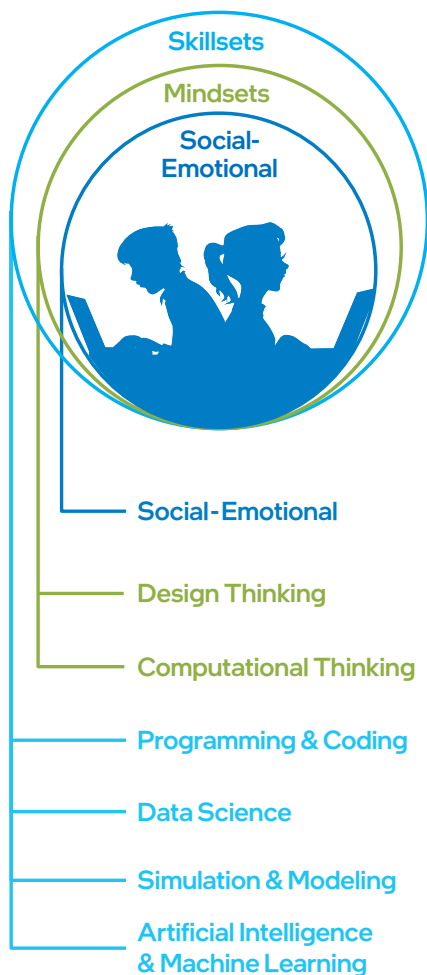
## Intel® Skills for Innovation (Intel® SFI) Framework Promotes Skills-based Learning

In response to the growing demand for a technological transformation in education, Intel has developed the Intel SFI Framework. The framework inspires teachers and learners to reach their full potential through a technology-supported, skills-based approach, empowering them to build critical skills anywhere and equipping them to meet the challenges of a rapidly changing world.

Intel SFI puts technology at the center of building advanced learning skills, rather than simply using technology to access existing educational content. In the Intel SFI Framework, technology is used not only to enhance but also to *transform* what and how students learn to *maximize learning outcomes*.

The Intel SFI Framework provides technology recommendations as well as tools to support decision makers and educators as they develop and implement a vision for enriching curriculum and designing the learning environment to meet skill-building goals. For students, having the right technology tools will help them analyze, evaluate, and create using the information they learn; develop advanced skills; and prepare for the jobs of the future.

The Intel® Skills for Innovation Framework focuses on key competencies needed in the workplace of tomorrow.



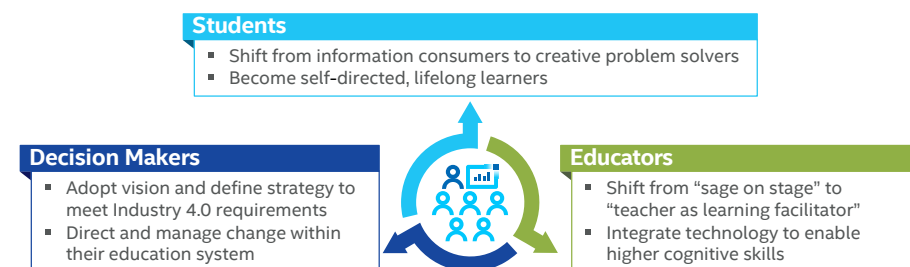
As part of reinventing the way technology is used in education, the Intel SFI Framework focuses on key competencies needed in the workplace of tomorrow, as shown in the graph to the left.

## Getting from Where You Are to Where You Want to Be

As education planners build a vision and identify steps to reach it, it helps to keep a couple of important concepts in mind. The first is adaptability: a future-oriented model shifts educational planning from short-term fixes to long-term visions. The goal is to plan for the future, not only for the future pandemic.

A second, related concept is robustness. Technology resources must be easy to access and use, adaptable to a variety of workloads and learning modalities, and must deliver reliable, secure access to learning resources that help build skills for tomorrow.

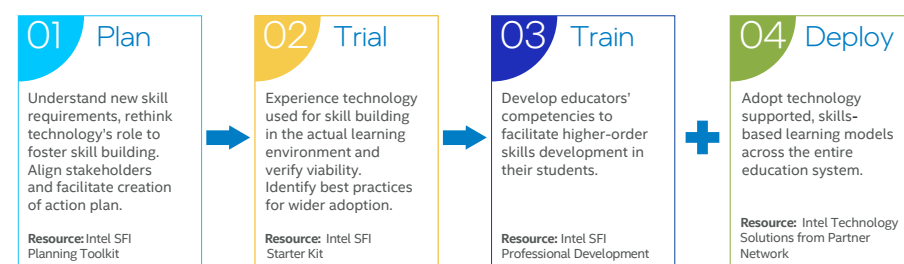
As education systems transform, it is inevitable that roles will evolve. Decision makers, educators, and students will all see their practices shift as the framework is implemented, and a change in one aspect of the learning environment will impact the rest of the system. A flexible mindset will be an advantage.



**Figure 1.** Participants will all see their roles shift as the framework is implemented.

## Path to Adopting Skills for Innovation

The Intel SFI Framework provides technology recommendations and tools to support decision makers and educators as they develop, try, and implement their skill-focused vision.



**Figure 2.** Intel provides support along the multi-step path to integrating Intel® Skills for Innovation into an educational system.

**Are you ready to take the next step?** We are. For more information about how to apply the Intel SFI Framework to your educational environment, please contact [skillsforinnovation@intel.com](mailto:skillsforinnovation@intel.com).



<sup>1</sup> Exhibit from "Skill shift: Automation and the future of the workforce", May 2018, McKinsey Global Institute, [www.mckinsey.com](http://www.mckinsey.com). Copyright © 2020 McKinsey & Company. All rights reserved. Reprinted by permission. Note: Western Europe: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

<sup>2</sup> Saadia Zahidi et al. The Future of Jobs Report 2020, (World Economic Forum, 2020), [http://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs\\_2020.pdf](http://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf)

<sup>3</sup> Conrad Hughes, Some Implications of COVID-19 for Remote Learning and the Future of Schooling, (UNESCO International Bureau of Education, 2020), <https://unesdoc.unesco.org/ark:/48223/pd0000373229>