

СЕКЦІЯ: ПЕДАГОГІКА

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HOW LONG WILL YOUR SKILLS LAST? DEPENDS ON YOUR JOB

Two-thirds of children entering primary school in 2016 are likely to find themselves working in jobs that do not yet exist.

This new environment of technological, demographic and socio-economic disruption is transforming industries and reducing the shelf life of workers' skills, according to the World Economic Forum's *Future of Jobs* report [1].

Researchers find that as the employment landscape changes, it becomes more important for businesses and workers alike to keep skills relevant and up to date. Some of the most in-demand skills today did not exist as recently as 10 years ago.

In fact, the pace of change is so fast that it's easy to fall behind. The chart below shows the rise and fall of the job market's most popular skills, with the demand for creativity and the ability to negotiate expected to increase dramatically over next four years.



Top 10 skills

in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

in 2015

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity



Source: Future of Jobs Report, World Economic Forum

Image: World Economic Forum [1].

It's estimated that by the year 2020, "more than a third of the desired core skill set of most occupations will be comprised of skills that are not yet considered crucial to the job today" (see [1]).

Creativity and critical thinking, for example, will be required by more than a third of all jobs in 2020. Whereas physical strength will only be valued in one in twenty jobs.

Some industries are more at risk of skill instability than others. The Financial Services and Investors sector is likely to see the most disruption, with more than 40% of the skills currently needed to perform well in the industry soon becoming redundant.

This chart shows which job sectors have the highest turnover of skills – or put more simply, which jobs will take the most retraining just to keep up.

Table 6: Skills Stability, 2015–2020, industries overall

Industry group	Unstable	Stable
Industries Overall	35%	65%
Media, Entertainment and Information	27%	73%
Consumer	30%	71%
Healthcare	29%	71%
Energy	30%	70%
Professional Services	33%	67%
Information and Communication Technology	35%	65%
Mobility	39%	61%
Basic and Infrastructure	42%	58%
Financial Services & Investors	43%	57%

Source: Future of Jobs Survey. World Economic Forum.

Image: World Economic Forum

So, in which areas will you get the most mileage out of your skills? Media, entertainment and information are the best placed, with almost three-quarters of the skills currently required to be good at your job likely to still be relevant in 2020.

The *Future of Jobs* report [1] highlights that our ability to anticipate future positions and identify the skills we'll need to get them, is critical if we're to survive job disruption over the coming decades.

According to many industry observers, we are today on the cusp of a Fourth Industrial Revolution.

The accelerating pace of technological, demographic and socio-economic disruption is transforming industries and business models, changing the skills that employers need and shortening the shelf-life of employees' existing skill sets in the process. For example, technological disruptions such as robotics and machine learning—rather than completely replacing existing occupations and job categories—are likely to substitute specific tasks previously carried out as part of these jobs, freeing workers up to focus on new tasks and leading to rapidly changing core skill sets in these occupations [2].

Current technological trends are bringing about an unprecedented rate of change in the core curriculum content of many academic fields, with nearly 50% of subject knowledge acquired during the first year of a four-year technical degree outdated by the time students graduate, according to one popular estimate [3].

There are various reasons for such dramatic shifts in expected skills requirements. As noted earlier, in the face of rapidly rising computing power, an ability to work with data and make data-based decisions will become an increasingly vital skill across many job families as employers scramble to build a workforce with solid skills in data analysis and presentation (e.g. through visualization) and the amount of potentially useful digital information generated and stored keeps increasing exponentially. In the Consumer sector, for example, vast amounts of data will allow for increased sophistication in inventory management, customer segmentation and product personalization, involving some use and familiarity with technology by jobs at all levels, from retail assistant through to more senior positions.

Businesses in industry sectors such as Mobility, Energy, Financial Services & Investors and Information and Communication Technology are increasingly finding themselves confronted with new consumer concerns about issues such as carbon footprints, food safety, labour standards and privacy. From a skills perspective, they will need to learn to more quickly anticipate these new consumer values, to translate them into product offerings and to become ever more knowledgeable about the processes involved in meeting these demands and the impact this may have on their employees' current skill sets and working practices. While most jobs require use of a wide range of skills, somewhat different skill set combinations are sought after in different industry sectors. Our dataset allows us some generalized observations about the impact of various disruptive changes on skills demand at an aggregate industry level.

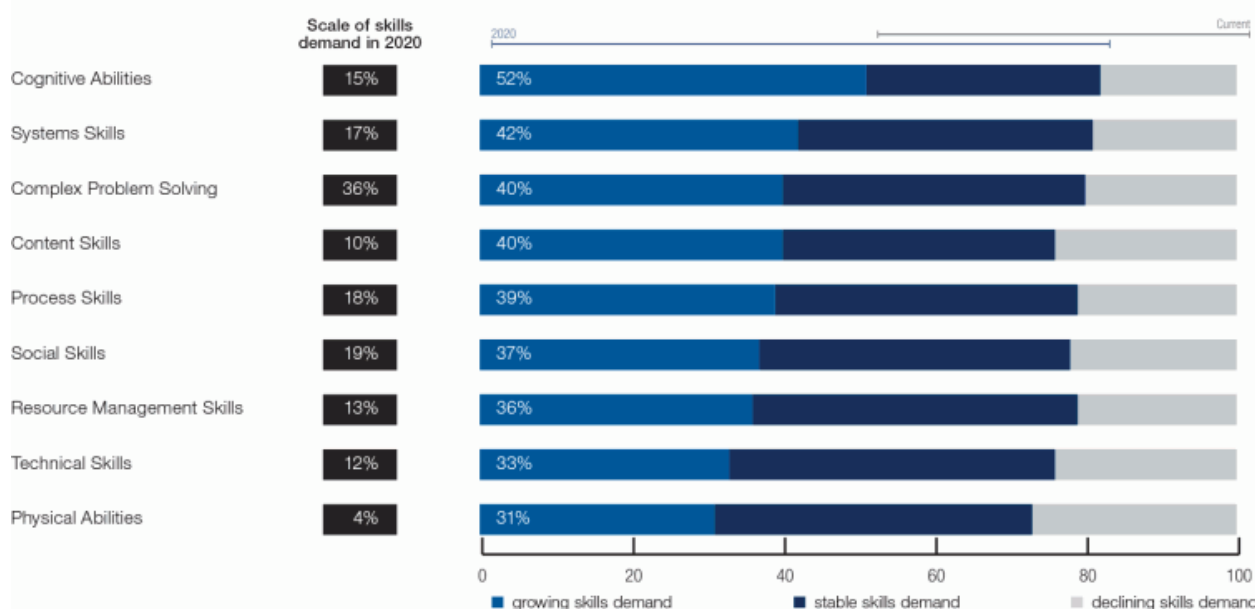
With regard to the overall scale of demand for various skills in 2020, more than one third (36%) of all jobs across all industries are expected by respondents to require complex problem-solving as one of their core skills, compared to less than 1 in 20 jobs (4%) that will have a core requirement for physical abilities such as physical strength or dexterity. However, along with the impact of disruptive changes on these sectors, it is anticipated that complex problem solving skills will become somewhat less important in industries that are heavily technical today—such as Basic and Infrastructure and Energy—in which technology may automate and take on a bigger part of these complex tasks going forward, and will ascend in those industries, such as Professional Services and Information and Communication Technology, that are expected to become more complex and analytical due to these trends [1].

Overall, social skills—such as persuasion, emotional intelligence and teaching others—will be in higher demand across industries than narrow technical skills, such as programming or equipment operation and control. Content skills (which include ICT literacy and active learning), cognitive abilities (such as creativity and mathematical reasoning) and process skills (such as active listening and critical thinking) will be a growing part of the core skills requirements for many industries.

If skills demand is evolving rapidly at an aggregate industry level, the degree of changing skills requirements within individual job families and occupations is even more pronounced (Figure 10).

Figure 10: Change in demand for core work-related skills, 2015-2020, all industries

Share of jobs requiring skills bundle as part of their core skill set, %



Source: Future of Jobs Survey, World Economic Forum.

For example, the increasing ubiquity of mobile internet combined with the coming-of-age of the Internet of Things promises to transform the daily routine of many frontline roles in the Sales and Related, Installation and Maintenance, and Manufacturing and Production job families across all industries, requiring a much higher level of technology literacy than in the past. As an ancillary characteristic to increased automation in these fields, employees are expected to have more responsibilities related to equipment control and maintenance and problem-solving skills, as well as a broader general understanding of the work processes of their company or organization.

Many formerly purely technical occupations are expected to show a new demand for creative and interpersonal skills. For healthcare practitioners, for example, technological innovations will allow for increasing automation of diagnosis and personalization of treatments, redefining many medical roles towards translating and communicating this data effectively to patients. Similarly, Sales and Related jobs may see an increased demand for creative skills and ideas for promoting a memorable shopping experience, as brick-and-mortar retail has to reposition itself in relation to e-commerce and online competition.

Overall, our respondents anticipate that a wide range of occupations will require a higher degree of cognitive abilities—such as creativity, logical reasoning and problem sensitivity—as part of their core skill set. More than half (52%, the bright blue part of the bar in Figure 10) of all jobs expected to require these cognitive abilities as part of their core skill set in 2020 do not yet do so today, or only to a much smaller extent. In another 30% of jobs (the dark blue part of the bar in Figure 10), demand for these skills is currently already high and will remain so over the 2015–2020 period. Only 18% of jobs requiring high cognitive skills today are expected to do so less in the future (the grey part of the bar in Figure 10).

Literature:

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