Promoting Skills for the New Economy: The Leap from Frameworks to Practices

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New Economy, New Skills

With the rapidly accelerating development of artificial intelligence, automation and globalization, there is near-unanimous agreement that education providers need to closely align with workforce needs to understand and promote the skills required in the new economy. The McKinsey Global Institute projects that by 2030, 3 percent to 14 percent of the global workforce will need to switch occupational categories; demand for jobs that can be replaced or partially supported by machines will be on the decline; and jobs involving technology, interpersonal interaction, management and other difficult-to-automate skills will be on the rise (Manyika, 2017). In response, a variety of initiatives have been proposed to jump-start efforts to help identify, define and promote the skills required for individuals to become sustainable contributors to the new economy.
Global Efforts to Respond to the Demands for New Skills

A number of frameworks have been created to document skills that are projected to be at the core of the newly emerging global workforce. One example on an international scale is the Future of Education and Skills 2030 project spearheaded by the Organisation for Economic Co-operation and Development® (OECD) (https://www.oecd.org/education/2030-project/). This initiative aims to identify the knowledge (disciplinary, interdisciplinary, epistemic, procedural), skills (cognitive and metacognitive, social and emotional, physical and practical), and attitudes and values (personal, local, societal, global) that are critical for individuals to thrive in the new economy, as well as shed light on instructional systems that can help promote acquisition of these competencies. This type of effort has great potential for providing a common language that will help countries, schools, teachers and other stakeholders engage in the development, elevation and promotion of new skills.

Job Outlook 2019, released by the National Association of Colleges and Employers (NACE, 2018), is another prominent example of a framework organizing the skills and attributes valued by employers. NACE® identified eight broad categories of career-readiness competencies:

- critical thinking/problem solving
- teamwork/collaboration
- professionalism/work ethic
- oral/written communication
- digital technology
- leadership
- career management
- global/multicultural fluency

The discrepancy between the importance of these skills and students’ level of preparation (e.g., 100 percent of employers believe that critical thinking is important but only 56.8 percent of them believe students are proficient critical thinkers; NACE [2018]) points to an urgent need for education providers to work more closely with employers to increase students’ workforce readiness. The NACE framework provides a valuable opportunity for higher education institutions to better align their pedagogical offerings with industry’s skill development needs.
The U.S. Chamber of Commerce Foundation is working on an initiative to more clearly communicate the knowledge, skills and other competencies necessary for job success to improve education and workforce alignment. This initiative is the *Job Data Exchange™ (JDX)*, a set of open data tools and resources that leverage advancements made in data standards to improve how quickly and clearly employers are able to communicate their hiring requirements for in-demand jobs, skills, competencies and credentials to education and workforce partners. The JDX tools and resources will allow students and workers to have access to accurate and up-to-date information regarding job requirements, which will better enable applicants to match their current skill sets to available positions. Building on the JDX, the U.S. Chamber of Commerce Foundation has also initiated the T3 Innovation Network®. Formed as a voluntary association of public and private stakeholders representing business, government, education and technology, the T3 Network aims to develop a road map for an open, public-private data and technology infrastructure for a more equitable talent marketplace.

Researchers at Educational Testing Service (ETS), a nonprofit organization and world leader in educational assessment and research, also are making strides in research to help promote critical skills for the new economy. Comprehensive frameworks have been developed to illustrate assessment issues related to key competencies: critical thinking, intercultural competency, civic competency, written communication and quantitative literacy (Griffith, Wolfeld, Armon, Rios, & Liu, 2016; Liu, Frankel, & Roohr, 2014; Roohr, Graf, & Liu, 2014; Sparks, Song, Brantley, & Liu, 2014; Torney-Purta, Cabrera, Roohr, Liu, & Rios, 2015). A white paper has been developed to highlight the clusters of competencies required by the global workforce and to pinpoint areas for future research (request a copy of the paper here). ETS also has embarked on a new initiative called Skills for a New Economy (SNE). The SNE initiative aims to help create an ecosystem for individuals to demonstrate and acquire skills, for education providers to promote skill development, and for employers to effectively verify skill proficiency (www.ets.org/sne).

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While the above-mentioned resources provide guidance as to the in-demand skills to focus on, continuous efforts are required to turn those resources into practices. To create a common ground of understanding, employers will need to more effectively define the skills they value and illustrate how those skills manifest in specific work contexts. Critical thinking, for example, is an often-cited but less-often-defined skill that carries a variety of connotations (e.g., analytical reasoning, problem solving, decision making, dispositional effectiveness). It is important for employers to illuminate what aspects of critical thinking they value and for what purposes. Clearer signals from employers can help educators design better programs and experiences for students.

In skill alignment and acquisition, there is no one-size-fits-all solution for the needs of different industries or occupational and education sectors. However, fruitful initiatives and collaborations tend to be the ones that have clear definitions and goals, have built a process for iteration and validation, and have adopted data-driven approaches.

One demand-driven, employer-led approach to building supply chains of talent aligned to dynamic business needs for both new and incumbent workers is the U.S. Chamber of Commerce Foundation’s Talent Pipeline Management® (TPM) initiative. TPM is the Foundation’s signature workforce development effort and supports employer leadership and engagement when designing and implementing
talent supply chains for both external (e.g., community colleges) and internal pipelines (e.g., upskilling). TPM currently is delivered through academy-style training (TPM Academy®) in which members of businesses and business organizations are trained and provided with resources to implement high-performing career pathway solutions. To date, TPM has trained members of more than 250 organizations in 29 states and Canada, and these organizations have launched close to 100 employer collaboratives involving thousands of employers.

There are also other ways to help students develop important competencies through experiential learning and practice. Knack, an education start-up for college tutoring (https://www.joinknack.com), offers innovative ways for student tutors to hone skills in critical thinking, problem solving, communication and even intercultural competency through rigorous training and tutoring. Naturally, this approach has the benefit of helping the students who receive the tutoring, as well. Knack received the 2019 Education Innovation Award from the Lumina™ Foundation, highlighting the growing interest in unconventional paths to skill acquisition through experiential learning and doing.
Developing Solutions Through Partnerships

The SNE initiative at ETS embraces a broad approach to understanding the challenges employers and education providers face in skill identification, assessment, training and certification. ETS’s SNE Team is working with partners to address skills gaps and facilitate a smooth education-to-employment transition. The SNE Team’s members have interviewed approximately 100 representatives from 35 higher education institutions and 30 representatives from seven industry sectors. Among the key information learned is that both higher education institutions and employers are interested in assessing and developing higher-order thinking skills such as critical thinking, oral and written communication, intercultural competency, and collaborative problem solving.

Many employers also prefer to have solutions contextualized for their specific industry sector. The SNE initiative’s next step is to form an ETS-led CoLab, where ETS researchers and assessment specialists will work closely with education and workforce leaders to identify solutions of mutual interest in the areas of skills assessment and development. Such solutions are envisioned to help employers better signal the skills they seek, help educational institutions better provide skills-based instruction and training, and help jobseekers better demonstrate their skills. The solutions ETS envisions will reflect the authentic needs of broad-based industry sectors (e.g., advanced manufacturing, health care, IT).

The skills shortage is not a standalone problem, but rather a multifaceted one. Effectively addressing the skills shortage will require creative solutions that tackle the entire ecosystem of skills assessment and training rather than focusing on isolated aspects of the problem. ETS actively seeks partnerships in both the education sector and the workforce to help identify, assess, verify and develop the skills that will make people successful in the new economy.

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References


