Workshop Report

Human Skills: From Conversations to Convergence

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Executive Summary

As automation and innovation drive ever-faster changes in occupations, workers will need to update their technology skills frequently. At the same time, another set of skills — with names like “soft” skills, power skills, and social skills — are anticipated to remain valuable across waves of technology-driven change. The MIT J-WEL Human Skills Matrix describes a set of these skills derived from analysis of 41 existing frameworks and interactions with more than 40 experts. Our robust research process resulted in a four-quadrant meta-structure that illustrates these social and higher-order thinking skills.

Relative to technological skills, these human skills are harder to define, harder to train, and harder to measure. Yet, their enduring value makes it essential to find ways to teach and assess them as a complement to existing STEM-oriented education.

In this workshop, J-WEL convened leading thinkers from academia, industry, edtech, and public policy to explore the essential human skills and attributes that workers need and how we might move towards a common understanding of these skills across the workforce ecosystem. The full-day event consisted of expert panels interspersed with structured breakout discussions. Our goal was to bring attention to the importance of these skills and provoke ongoing discussion and collaboration in the extended communities in which we work.
Top Takeaways

▪ **Incorporate human skills into learning at all ages:** Teaching human skills from a young age will equip learners with valuable tools and create the momentum for students to continually improve their skill sets as they graduate from the classroom to the workforce. Beyond traditional educational institutions, human skills learning should happen throughout a worker’s career.

▪ **Make human skills learning as experiential as possible:** Curricula should contain opportunities to practice using human skills, not just learn about them: think case studies, challenging situations, games, or simulations. In-class presentations or group projects can also create opportunities for students to develop and hone human skills in technical classes. Facilitators can ask employees to create problem-solving frameworks for their actual work-related tasks, giving employees immediate insight into how human skills apply to their day-to-day work.

▪ **We need to reconsider how we assess the value of different kinds of training and credentials:** Although a Bachelor's degree may be considered shorthand for skills attainment, that metric involves learning well in excess of the skills in one's major. It also excludes people who face barriers in the educational system. Furthermore, schools do not grant degrees in human skills. Just as technical fields are beginning to recognize micro-level certifications in specific skills, there is value in signaling the human skills an individual possesses. Reliable assessments are emerging for some human skills. As the field matures, we could begin to see credentials based on human skills to complement those for technical skills.

▪ **Human skills must be understood and assessed in context:** While critical thinking, persistence, and personal planning and organization may vary little from context to context, others vary more significantly. Communication methods differ widely from academic research conferences to marketing meetings, or between doctors versus between doctors and patients. What may be seen as openness and leadership potential in one culture may be seen as rudeness and lack of deference in another. As human skills learning and assessment mature, we will need multiple methods through which we can assess an individual’s human skills fitness for a given role.

▪ **In an increasingly virtual workplace, human skills need extra attention:** As technology increases the extent of remote work for some people, many unspoken and unconscious norms need more conscious attention. Individuals must pay more careful attention to how they relate with others. Managers must find new ways to engage their employees. Teams or colleagues must find ways to substitute for serendipitous hallway conversations. Now, more than ever, it is important to take a harder look at recognizing and training these “softer” skills.
Panel 1: What Are Human Skills? Why Are They Important?
**Speakers:** Gilda Colin (Global Curriculum and Instruction Lead | Generation), Jean Hammond (General Partner | LearnLaunch), Mariam Kakkar (Global Chief of Talent Development | United Nations Development Programme), Christine Ortiz (Morris Cohen Professor of Materials Science and Engineering | MIT, Founder | Station1)

**Moderator:** Susan Young (Assistant Director | MIT J-WEL Workforce Learning)

**Insights**
- In order to bridge the skills gap in the workforce, we need to integrate human skills learning into the foundation of the school curriculum, rather than treating it like a supplement to technical skills.
- Establishing a workplace culture that values human skills is critical to fostering digital transformation.
- Although we currently lack common human skills-language and a common set of metrics, the attributes employers want to see in their employees is fairly universal: personal responsibility, growth mindset, persistence, and future-orientation.

**Looking to the Future**
- Students and employees at every stage of their careers — from pre-K to gray — need to learn how to learn.
- Educators and employers should foster cultures of lifelong career advancement and social advancement.

“If we’re going to make education work for workers, we need skills taxonomies as a common language.”

Jean Hammond
Panel 2: How to Train Human Skills?

Speakers: Charles Bodwell (Enterprise Development Specialist - East Asia and Pacific | International Labour Organization), Stephanie Couch (Executive Director | Lemelson-MIT Program), Krish Menon (Co-Founder & CTO | Hardskills), Wes Sonnenreich (Co-CEO and Co-Founder | Pracerta)

Moderator: George Westerman (Principal Research Scientist | J-WEL Workforce Learning)

Insights

- While STEM skills are relatively codified and teachable, human skills must often be trained in a more experiential and social approach.
- Both peer-led training and instructor-led training can help scale human skills learning. If peers create their own framework to work through real scenarios they have dealt with, they can share and contextualize the problems together. Alternatively, if supervisors act as a facilitator in activity-based training, that coordination can improve their future interactions with their employees.
- Technology can engage introverted learners who might be reluctant to participate in other hands-on human skills training activities.
- A lot of experiential learning happens off-system, so we have to make sure that data is accurately captured when measuring the effectiveness of human skills training.

Looking to the Future

- Introduce learners to human skills at a younger age; learners with human skills will be better equipped for lifelong learning.
- Learning should be contextually relevant, and be focused on deepening skills.

“Companies are looking for workers who recognize their ideas have validity, so they can learn to solve problems on their own and self-advocate.”

Charles Bodwell

Pictured left to right: Stephanie Couch, Krish Menon, Wes Sonnenreich, and Charles Bodwell
Panel 3: How to Assess Human Skills?

Speakers: Namrata Kala (W. Maurice Young (1961) Career Development Professor of Management, Assistant Professor in Applied Economics | MIT Sloan School of Management), Momtchil Kovatchev (Vice President - Strategic Initiatives and Institutional Research | Hult International Business School), Louisa Rosenheck (Associate Director & Creative Lead | MIT Playful Journey Lab), Richard Varn (Distinguished Presidential Appointee - Retired | Educational Testing Service, CEO | RJV Consulting)

Moderator: Susan Young (Assistant Director | MIT J-WEL Workforce Learning)

Insights

- We need novel approaches to assess human skills such as games, simulations, forced-choice assessment.
- Careful research shows that giving human skills to workers leads to a more productive workforce in addition to increased worker satisfaction.
- Institutions should work towards a progression of credentials for human skills similar to how we validate hard skills now through credit hours and GPA.

Looking to the Future

- To create a new assessment of human skills, work backwards from the desired outcomes and values, and then create an evidence system to support them.
- Educators should develop new models of teaching that give learners direct feedback on how to grow.

“Work backwards from the values and outcomes you want your assessment systems to achieve, and those values should drive your assessment thinking.”

Richard Varn
Breakout Sessions

Expert Jury: Susan Brennan (Assistant Dean - Career Development Office | MIT Sloan School of Management), Isabel Cardenas-Navia (Director of Research | Workcred), Marianela Comino (Global Director - Talent Management | Anheuser-Busch InBev), Janell Schmidt (Vice President of Human Resources | Amsted Rail)

Over the course of the workshop, participants came together in small breakout groups to discuss and expand on the ideas presented during the panels, as well as share relevant experiences from across the workforce ecosystem. Each breakout session was designed to provoke participants to translate lessons learned and ideate on potential solutions across the human skills definition, training, and assessment landscapes, across a variety of contexts. The workshop concluded with short presentations by representatives from each breakout group with findings and recommendations for consensus building.

Breakout Group A

Challenge
Learners do not know how to identify or develop their human skills.

Proposed Solution
Empower learners to become aware of their human skills by using a text messaging platform to map hypothetical situations to the corresponding human skills required.

The platform would use behavioral nudges to identify the learner’s weaknesses and prompt them to improve in an accessible way.

Expert Commentary
Q: Is this platform dynamic enough to be sustainable as skills needs change?
A: While the basic interface would not need many changes, the content on backend would be updated to reflect changing skills frameworks.
**Breakout Group B**

**Challenge**
How can we validate students’ or workers’ human skills proficiencies?

**Proposed Solution**
Create a currency-like approach for human skills credentials. The various licensing bodies across the world would determine the human skills standards for given professions and communities.

**Expert Commentary**

**Q:** How does the currency translate to productivity?
**A:** The skills standards are determined by the community, so the higher the proficiency, the more employers are willing to “pay” for the skill.

**Q:** Why should busy employers adopt this platform?
**A:** Because the standards are coming from the community itself, the currency has an inherent ability to reduce turnover friction.

**Breakout Group C**

**Challenge**
Educators need to gain human skills themselves before they can teach the material to their students.

**Proposed Solution:**
Provide educators with interactive experiences to gain human skills.

Once educators have acquired those skills, they can collaborate with their peers on creative lesson plans infused with opportunities for human skills development for their students.

The ultimate goal is to integrate these skills into educators’ current curriculum, rather than replace what they are already doing.

**Expert Commentary:**

**Q:** How do we ensure that teachers adopt this human skills learning and teaching?
**A:** This solution would be a mandate in every strategic plan, just like social-emotional learning or college readiness.
**Breakout Group D**

**Challenge**
Can we utilize the immutable recording capabilities of the blockchain to verify human skills credentials?

**Proposed Solution**
A New marketplace called “SkillBucks” would give economic value to human skills, which would be verified on the blockchain. The marketplace demands would determine the value of SkillBucks.

Driving individual motivation first would then motivate whole organizations to value SkillBucks credentials.

By providing a standard framework for employers to see the quantifiable value of human skills, the marketplace would also provide dynamic data on skill trends in the workforce.

**Expert Commentary**

**Q:** How could an employer use this marketplace?

**A:** Employers could use the blockchain to search for candidates, and in doing so, candidates would be motivated to acquire and signal those skills in the marketplace.

**Breakout Group E**

**Challenge**
Training providers do not teach the skills that employers are looking for.

**Proposed Solution**
Create a consortium to identify the human skills that employers value and provide pre-employment training.

**Expert Commentary**

**Q:** What is the correlation between the consortium’s pledge to teach human skills and jobs that need to be filled?

**A:** Companies that inform the consortium about the skills they require for a given job will conversely pledge to give first look to the students from the consortiums whose skills align with those priorities.

**Q:** What impetus would you give to an employer to join this consortium instead of continuing with their current recruitment methods?

**A:** This method could bridge skills gaps between industries by giving consideration to candidates who might have otherwise been overlooked.
Breakout Group F

Challenge: How can lifelong learning bridge the skills gap?

Proposed Solution
Since learners do not always have access to the resources that enable them to develop their human skills, SkillCoin would standardize those learning pathways. Using SkillCoin, a learner would curate their own skills training based on workforce needs and their existing skill set. Their SkillCoin pathway would be available to employers if they chose to share it.

An institute that offers SkillCoin teaches skills that are sought after by employers, which would draw learners to the program.

Expert Commentary:
Q: How would SkillCoin differentiate between learners who are in different stages of skills development?
A: SkillCoin would create different levels of learning depending on the learner’s stage and mastery of skills, from early engagement and exposure in K-12 through mastery in employment.
Where We Are Going

This event, which happened only days before most workplaces closed or went virtual, convened a diverse community of smart, connected and energetic people who care deeply about human skills. Looking ahead, J-WEL wants to continue to build momentum and convergence around human skills, including innovative ways of teaching, measuring, and communicating them. The need has never been greater: as our workplaces become increasingly virtual, human skills in particular need extra attention. We hope to facilitate more events like this in the future—potentially focusing on specific challenges associated with human skills, such as training and assessment. We are also happy to serve as a convergence point for information on existing and future solutions around these skills. And, of course, we are eager to work with organizations that want to help people grow and demonstrate their human skills.

To keep up with the latest on our human skills work, visit https://jwel.mit.edu/human-skills-matrix and consider joining the Human Skills Working Group, where participants can share relevant resources and brainstorm ways we can collaborate further.

To learn more about our human skills and other workforce learning-related work, contact J-WEL Workforce Learning Principal Research Scientist George Westerman at georgew@mit.edu or Assistant Director Susan Young at susany@mit.edu.

About J-WEL

An initiative of MIT and Community Jameel, the Abdul Latif Jameel World Education Lab (J-WEL) works with our member organizations to promote excellence and transformation in education at MIT and worldwide. We engage educators, technologists, policymakers, societal leaders, employers, and employees through online and in-person collaborations, workshops, research, and information-sharing events. J-WEL member organizations work with MIT faculty and staff to address global opportunities for scalable change in education.
Susan Young is Assistant Director of Workforce Learning at J-WEL. She leads membership development and community building, manages the Workforce Learning research grant program, and supports program development and research activities. Previously, she was Producer of the MIT Inclusive Innovation Challenge, MIT’s premier future of work prize, and Assistant Director at the MIT Initiative on the Digital Economy.

Dr. George Westerman is Faculty Director for Workforce Learning in the MIT Jameel World Education Laboratory, and a Senior Lecturer in the MIT Sloan School of Management. His research examines the transformative impact of digital innovation on companies and workers. He is recognized as a global thought leader on digital transformation and leadership in technology-intensive environments.

Fostering Global Transformation

J-WEL is an initiative of MIT and Community Jameel, the social enterprise organization founded by MIT alumnus Mohammed Jameel ’78. Community Jameel was established in 2003 to continue the Jameel family’s tradition of supporting the community, a tradition started in the 1940s by the late Abdul Latif Jameel, founder of the Abdul Latif Jameel business, who throughout his life helped tens of thousands of disadvantaged people in the fields of healthcare, education, and improving livelihoods. Today, Community Jameel is dedicated to supporting social and economic sustainability across the Middle East and beyond through a range of initiatives including J-WEL, as well as three other labs at MIT: the Abdul Latif Jameel Poverty Action Lab (J-PAL), the Abdul Latif Jameel Water & Food Systems Lab (J-WAFS), and the Abdul Latif Jameel Clinic for Machine Learning in Health (J-Clinic).