

The Impact of I-O Psychology on Workforce Development and Learning

The United States workforce remains a highly skilled workforce. However, new knowledge and skills are needed to adapt to changing economic demands, emerging crises, and new opportunities as innovation continues unabated in various science, technology, engineering, and mathematics (STEM) fields. As the need for STEM-educated, high-performing employees increases, understanding how these demands impact the processes, procedures, and practices of organizations employing the American workforce is essential. Additionally, the demand for re-tooling of current workers for roles involving more STEM knowledge, skills, abilities, and other characteristics (KSAO) continues to grow and requires the government and other organizations to adjust their training procedures/processes. These demands are precipitated by increased economic competition internationally, the suddenly remote workforce, the importance of diversity and inclusivity, and unexpected demands placed upon both the government and organizations by crises that emerge. As federal stakeholders consider programs and policy regarding the national response to the need to develop and maintain the most skilled workforce on the planet, the Society for Industrial and Organizational Psychology (SIOP) urges the application of evidence-based methods in industrial and organizational (I-O) psychology.

I-O psychology is the scientific study of working and the application of that science to workplace issues facing individuals, teams, and organizations. Collectively, I-O psychologists bring over a century of expertise in understanding and predicting workplace behavior, including understanding the training and education demands of the modern workplace, which is increasingly becoming more sophisticated due to technological advancements. Below are some of the ways I-O psychologists can help in this space:

CHALLENGE: Organizations struggle to assist their workforce with reskilling and upskilling around in-demand STEM skills needed for confronting new technical challenges, disruptive innovations, and other novel problems within traditional American corporations.

I-O IMPACT: I-O psychologists have a deep history of studying the science of training in organizations. This includes both the development and deployment of effective training programs, in addition to evaluating the effectiveness of organizational training initiatives. Effective workplace retraining can combat STEM talent shortages, keep workers active in the workplace longer, and ensure that lifelong learning needs are met.

CHALLENGE: The need for a high-performing STEM educated workforce continues to increase in the United States, with demand outstripping supply. The United States needs to provide effective STEM education that prepares students to become high-performing members of the STEM workforce.

I-O IMPACT: I-O psychologists understand the demands on the STEM workforce which impact the processes, procedures, and practices of organizations employing the American workforce. Workforce readiness is an area of expertise of most I-O psychologists, including aspects of training, re-training, and realistic job preview. Additionally, I-O psychologists have expertise in program evaluation and survey technology, making them particularly poised to assist in the evaluation of workforce readiness and the state of the current workforce skillset. This knowledge can be used to shape federal policies regarding STEM education.

CHALLENGE: Employers often identify a gap between the skills needed by employees and those possessed by the readily-available labor force. This so-called “skills gap” highlights the need for alternative pathways to skills training and workforce development, such as vocational training, career and technical education, and short-term credential programs.

I-O IMPACT: I-O psychologists originated the work of job analysis and evaluation. This expertise allows for the identification of KSAOs necessary for jobs of all types. As the United States workforce attempts to retool for new types of jobs or to jobs that are suddenly needed amid a crisis, I-O expertise can be leveraged to accurately identify both the KSAOs needed and the alternative pathways to education, training, and credentialing.

CHALLENGE: Work-based learning opportunities allow students and workers to gain hands-on experience while earning money, making continued education more accessible for a greater number of people. However, apprenticeship programs and other work-based learning opportunities can fail to deliver meaningful training when utilizing evidence-based practices grounded in a research base.

I-O IMPACT: For work-based learning to be impactful, programs need to be carried out appropriately, to set students up for successful careers in STEM fields. I-O psychologists can inform best practices for work-based learning programs and identify innovative models for apprenticeship program development and implementation. Specifically, one of I-O psychologists’ core areas of expertise is training within organizations, including the various types of training, effective best practices for training, and evaluating knowledge/skill transfer.

CHALLENGE: Organizations require creativity and innovation to stay competitive, and at the national level, our economic growth relies on creativity and innovation.

I-O IMPACT: I-O Psychologists understand what is required to be creative and lead innovation at the individual, team, and organizational level. At the individual level, selecting for creativity and innovation and training to improve creativity and innovation are key. Many creative endeavors require teams, and in many cases interdisciplinary teams. I-O Psychologists have knowledge of teamwork and leadership that facilitates creativity and innovation.

SIOP is a community of nearly 10,000 members worldwide with a common interest in promoting the research, practice, and teaching of I-O psychology to enhance human well-being and performance in organizational and work settings. SIOP provides a platform for scientists, academics, consultants, and practitioners to collaborate, implement, and evaluate cutting-edge approaches to workplace challenges across sectors. SIOP urges federal policymakers to engage I-O psychologists to promote efficient and effective strategies to educating more I-O psychologists and increase the availability of STEM educated high-performing individuals to continue to build and grow the American economy.

To this end, SIOP has launched a new Advocacy Area on the Education, Development, and Training for a High-Performing Workforce. The Advocacy Area features a working group of I-O psychologists from industry and academia with targeted expertise in relevant areas, such as the education and training of I-O psychologists as well as the science of training in organizations. The Advocacy Area will be available to provide evidence-based support to policymakers as they address the various challenges and opportunities related to the future of work moving forward.