



**Beyond Keeping American Workers Current:  
Roadmaps for Career Progression**

Louise Underdahl, Ph.D.

## Table of Contents

<i>Introduction</i> .....	1
<i>Context</i> .....	3
<i>Employer Need: Well-Qualified Staff</i> .....	5
<i>Employer Need: Reduce Turnover Rate</i> .....	5
<i>Worker Expectation: Engaging Job/Career</i> .....	8
<i>Worker Expectation: Career Progression</i> .....	9
<i>Top 10 Skills in 2025: Reskilling and Upskilling Future-Ready Work Force</i> .....	11
<i>Roadmaps for Career Progression</i> .....	11
<i>Example: Curriculum Map</i> .....	12
<i>Example: SkillsCommons.org</i> .....	14
<i>Conclusion</i> .....	17
<i>References</i> .....	19

A lack of clear pathways for career progression is the main reason Americans feel held back in their careers.

Career Institute, 2023

## **Introduction**

The University of Phoenix Career Optimism Index was created in 2021 to examine American workers' sense of optimism about their careers in the context of workplace, economic, and societal trends and challenges. The Index was expanded in 2022 to explore new topics related to job and career shifting and needs for reskilling and upskilling. The 2023 edition was further expanded to include additional insights from employers (Career Institute, 2023).

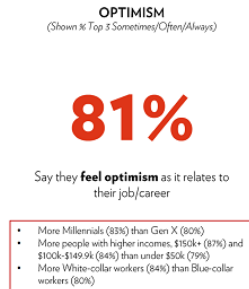
The Index provides a current snapshot of career optimism in the United States and the 20 largest metropolitan areas; fieldwork associated with the 20-minute online survey was completed from December 9, 2022 to January 13, 2023:

- 5,000 United States (U.S.) nationally representative adults, age 18+ who either currently work or wish to be working.
- 500 U.S. employers who are influential or play a critical role in hiring and workplace decisions within a range of departments, company sizes, and industries.

## Table 1

### *Americans are Optimistic about Their Job/Career*

#### **MOST AMERICANS SAY THEY ARE OPTIMISTIC ABOUT THEIR JOB/CAREER**



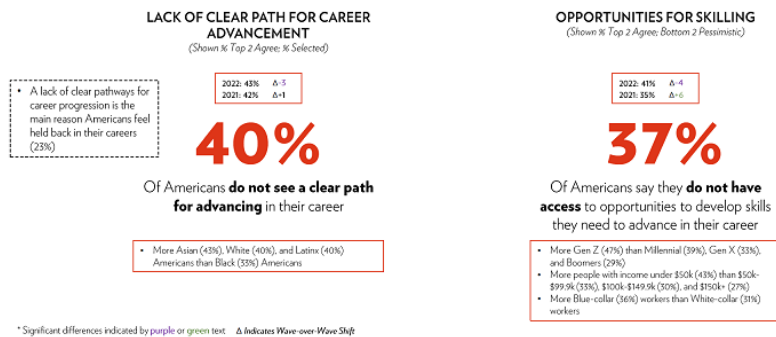
*Note:* Adapted from “*The University of Phoenix Career Optimism Index™ 2023: Survey of U.S. Workers + Employers*, slide 19, by Career Institute, 2023, University of Phoenix.

Responses from U.S. workers indicated 81% are optimistic that their innate resilience, personal fulfillment goals, and adaptability will achieve career success (Career Institute, 2023, slide 19), although 40% do not see a clear path for advancing in their current position due to perceived lack of opportunity for skills development (Career Institute, 2023, slide 43); 70% would be more likely to stay throughout their career if their company gave them more opportunities to apply new skills (Career Institute, 2023, slide 44) and 40% are less engaged at work recently (Career Institute, 2023, slide 27).

## Table 2

### *A Lack of Clear Pathways*

## MANY DON'T SEE A PATH FOR ADVANCING IN THEIR CAREER – SKILLS DEVELOPMENT IS A KEY BARRIER TO CAREER ADVANCEMENT



*Note: Adapted from “The University of Phoenix Career Optimism Index™ 2023: Survey of U.S. Workers + Employers, slide 43, by Career Institute, 2023, University of Phoenix.*

Responses from U.S. employers indicated 74% say employees need to learn new skills within the next year to continue their current job (Career Institute, 2023, slide 45), a lack of well-qualified applicants is the greatest challenge to finding talent for 46% of organizations (Career Institute, 2023, slide 45), 74% are concerned about the rate of turnover at their organization (Career Institute, 2023, slide 34), and 58% feel employees have been less engaged at work recently (Career Institute, 2023, slide 27).

Data validate significant gaps between what American workers believe their employers do to support them, and what employers themselves believe their companies offer employees. Building roadmaps for career progression can eliminate existing disconnects and help employers channel workers' optimism in their own abilities to their current place of work. This white paper describes actionable strategies to align worker expectations with employer needs to benefit both businesses and their workforces.

### Context

Widespread adoption of digital and automated work processes has necessitated large-scale reskilling and upskilling workforce initiatives by educators, employers, and policymakers (Dondi et al., 2020; Lang, 2023; Pradhan & Saxena, 2023). Industry 4.0 (I4.0), also known as the Fourth Industrial Revolution, encompasses digitization and automation, interconnectivity between cyber and physical processes, and utilizing real-time data to optimize decision-making and performance (Tortorella et al., 2023). Distinguishing between myth and fact, Tortorella et al. (2023) delineated the following facts:

- I4.0 technologies alone do not lead to significant improvements on performance
- Non-digitization leads to obsolescence
- Ethical and legal standards must be revised
- Digitization must be aligned with other business strategies
- Technologies integration must be customized according to the application needs
- Digitization requires expertise and workforce upskilling
- The use of implementation pilots is generally sensible
- Digitization can be used to transform all or part of the organization
- End customers do not always perceive the digital transformation initiatives
- Changes in sociocultural aspects due to the digitization are not easily observed

(Tortorella et al., 2023, p. 6)

The World Economic Forum (Schwab & Zahidi, 2020) predicted 50% of all employees worldwide would need reskilling by 2025. Li (2022) offers a succinct assessment: “Industry 4.0 is about creating a unique life-long education system that ensures a future-ready workforce” (Li, 2022, p. 1-2).

**Employer Need: Well-Qualified Staff**

With 74% of employers indicating employees need to learn new skills within the next year to continue their current job (Career Institute, 2023, slide 45), learning aptitude is a requisite to employability. Widespread adoption of digital and automated work processes has necessitated large-scale reskilling and upskilling workforce initiatives by educators, employers, and policymakers (Dondi et al., 2020; Lang, 2023; Pradhan & Saxena, 2023). Concerns associated with university-to-work transition and work-readiness of graduates (Dondi et al., 2021; Mainga et al., 2022) have incentivized employers to “look inward, not outward” (McKinsey, 2022), defined as building skills of existing employees rather than hiring new staff. For workers, transitioning to a new position may be perilous, with 33% of respondents reporting a "boomerang" experience in which they returned to a previous job or a company they had previously left (Career Institute, 2023, slide 33). Yet, employers are ambivalent about return on investment for reskilling and upskilling initiatives: 29% of employers say they do not invest in reskilling/upskilling programs because of limited employee interest and lack of time/resources for hands-on training programs (Career Institute, 2023, slide 48).

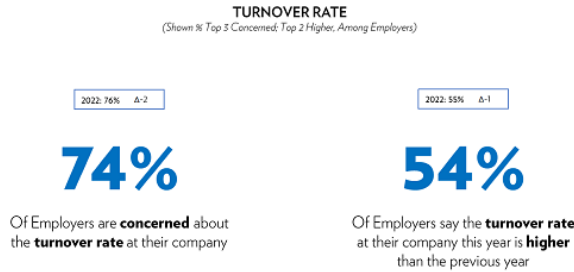
**Employer Need: Reduce Turnover Rate**

Employer responses indicated 74% are concerned about the turnover rate at their organization (Career Institute, 2023, slide 34). A first step would be to understand why workers are willing to go to great lengths to make a change in their careers, with 30% willing to quit their jobs without having another one lined up and 46% willing to accept a severance package of three months' pay and leave the company (Career Institute, 2023, slide 29). Workers articulated their rationale for “quitting with backup” as follows (Career Institute, 2023, slide 30):

**Table 3**

*Employers Concerned about Turnover Rate*

**CONSEQUENTLY, EMPLOYERS ARE CONCERNED ABOUT TURNOVER RATE**



*Note:* Adapted from “*The University of Phoenix Career Optimism Index™ 2023: Survey of U.S. Workers + Employers*, slide 34, by Career Institute, 2023, University of Phoenix.

**Table 4**

*Why Workers are Willing to Quit Without a Backup*

<b>Unhealthy Work Environment</b>	<b>Not Satisfied with Current Job</b>
If it got to the point where my mental and physical health was at the threshold I would leave.	Because if I'm unhappy and/or the job isn't meeting my needs . . . I would quite that job without having another one lined up.
Because sometimes your mental health and overall well-being is more important.	If I am not happy or satisfied in a job there is no reason for me to stay there.
If the situation is bad enough, I would quit for my mental health.	I just did it -- extremely unhappy and dissatisfied with previous employer
I would quit one job without having another lined up only if the work atmosphere was so toxic it was affecting my health and wellbeing.	I wouldn't stay somewhere that doesn't fit my needs. It would take extenuating circumstances in order for me to do this.

*Note:* Adapted from “*The University of Phoenix Career Optimism Index™ 2023: Survey of U.S. Workers + Employers*, slide 30, by Career Institute, 2023, University of Phoenix.

Those who never have reskilling/upskilling opportunities are more likely to say their job has a negative impact on their mental health (42%) than those who have reskilling/upskilling

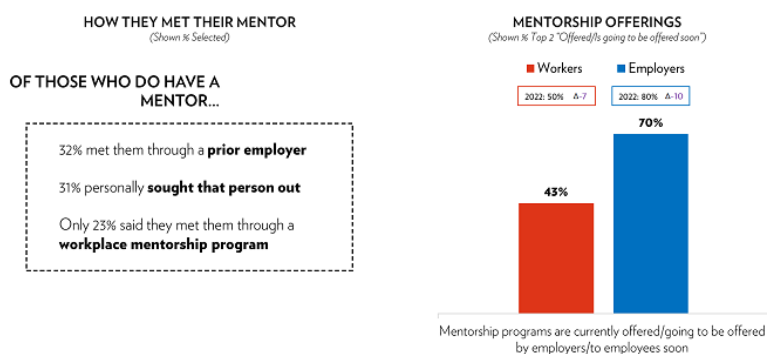


opportunities at least monthly (26%) (Career Institute, 2023, slide 47). For workers with a mentor, 32% met them through a prior employer and 31% personally sought out the person; only 23% met through a workplace mentorship program (Career Institute, 2023, slide 40). Although recent research (Jia-jun & Hua-ming, 2022) linking organizational support, career growth, and career ability development to employee engagement and organizational commitment aligns with 2023 Index data, further investigation of specific factors detrimental to mental and physical health, as well as factors that generate the “not satisfied with current job” intention to leave, might yield useful insights.

**Table 5**

*Employers Can Emphasize Mentorship*

**EMPLOYERS CAN PLACE A STRONGER EMPHASIS ON WORKFORCE MENTORSHIP PROGRAMS**



*Note:* Adapted from “*The University of Phoenix Career Optimism Index™ 2023: Survey of U.S. Workers + Employers*, slide 40, by Career Institute, 2023, University of Phoenix.

Since 68% of workers would consider staying at their current job if things could change (Career Institute, 2023, slide 44), modifying the work environment for these workers could significantly reduce turnover. Employers’ perspective on the rewards of retention are well articulated by the director of information technology and cybersecurity at the Government Accountability Office, who validated the institutional knowledge the long-term workforce represents: “The more

attractive you can make it for folks to consider staying long term the better off you are. You minimize turnover, you create [a] great corporate knowledge base that exists and gets turned over as new people come in, and people who've been there a long time can share their experiences and pass that on to the sort of what I'll call the next generation of workers" (Chapman, 2023).

### **Worker Expectation: Engaging Job/Career**

Work engagement has been described as a positive manifestation of work-related personal fulfillment that optimizes effectiveness and organizational performance (Simbula et al., 2023; Waheed et al., 2023) and may be assessed to identify opportunities for workplace improvement. In the 2023 Index, workers' negative perceptions about their job/career represented a strong call to action (Career Institute, 2023, slide 26): 56% feel indifference; 51% feel cynicism; 50% feel bored; 44% feel isolated. Viewing employee engagement as a psychological contract between employee and organization (Kolb et al., 1979), these negative indicators could be associated with employees' reduced commitment to the organization and ultimate intention to leave (Jia-Jun & Hua-Ming, 2022; Moss, 2021; Robinson et al., 2004) Mentors represent a potential mitigation: American workers with a mentor are more likely to say they feel confident (93% vs. 86%), fulfilled (89% vs. 75%), and enthusiastic (90% vs. 77%) about their career/job than those without a mentor (Career Institute, 2023, slide 39). While 70% of employers say mentorship programs are currently offered/going to be offered to employees (Career Institute, 2023, slide 40), only 43% of employees believe their employers actually offer/plan to offer such programs. Assigning a high priority to mentorship is a first step and could be complemented by integrating

web-based resources, such as Ensher’s (2017) “Developing a Mentoring Program” on LinkedIn, to create robust mentorships.

**Table 6**

*Workers Feel Indifference, Cynicism, and Boredom*

**HALF SAY THEY FEEL INDIFFERENCE, CYNICISM, AND BOREDOM**



*Note:* Adapted from “*The University of Phoenix Career Optimism Index™ 2023: Survey of U.S. Workers + Employers*, slide 26, by Career Institute, 2023, University of Phoenix.

**Worker Expectation: Career Progression**

Most Americans (81%) report optimism about their job/career (Career Institute, 2023, slide 19) because of the availability of the job opportunities requisite to career progression (Career Institute, 2023, slide 20). For U.S. workers, career optimism is driven by personal factors as well as key factors that employers can tangibly support. A driver analysis run on multiple survey questions to determine which were the most important in determining respondents' optimism identified the top five factors (Career Institute, 2023, slide 22):

**Level 1**

I see a clear path for advancing in my career.

**Level 2**

I have a strong skillset to be successful in my career.

I feel personally fulfilled by my current job/career.

### Level 3

I am resilient when facing challenges in my career.

I adapt easily to new work situations.

**Table 7**

### *Career Optimism*

---

**CAREER OPTIMISM IS DRIVEN BY PERSONAL FACTORS AS WELL AS KEY FACTORS THAT EMPLOYERS CAN TANGIBLY SUPPORT**

WHAT DRIVES WORKERS' OPTIMISM?



*Note:* Adapted from “*The University of Phoenix Career Optimism Index™ 2023: Survey of U.S. Workers + Employers*, slide 22, by Career Institute, 2023, University of Phoenix.

American workers are not alone in synthesizing optimism with career mobility and progression; the literature on career competencies (Ayoobzadeh, 2022), career self-management (Hirschi et al., 2022) and sustainable careers (Underdahl, 1989; Wang et al., 2023) encompasses career crafting (Ge et al., 2023; Valcour, 2013) and even career proactivity (Akkermans & Hirschi, 2023). The latter concept is defined as “an individual's self-initiated and future-oriented actions aiming to influence, change, and improve career circumstances including the situation and the self” (Akkermans & Hirschi, 2023, p. 200) and provides a conceptual framework for the 2023 “Free Agent” labor market, where workers are open to pursuing new paths (Career Institute, 2023, slide 9).

### **Top 10 Skills in 2025: Reskilling and Upskilling Future-Ready Work Force**

Business leaders' responses to the World Economic Forum's Future of Jobs Survey indicated that 94% of employers expect employees to "pick up new skills on the job" (Whiting, 2020, para. 14). The top 10 skills of 2025 accentuate self-management (Whiting, 2020, para. 11):

1. Analytical thinking and innovation
2. Active learning and learning strategies
3. Complex problem-solving
4. Critical thinking and analysis
5. Creativity, originality, and initiative
6. Leadership and social influence
7. Technology use, monitoring, and control
8. Technology design and programming
9. Resilience, stress tolerance, and flexibility
10. Reasoning, problem-solving

Evidence suggests digitalization is predicated on education and learning programs that infuse technology into content and integrate experiential activities to train, skill, reskill, and upskill the future-ready workforce (Li, 2022). Education alliances between employers, educators, and governmental policymakers are a promising framework for adapting to economic uncertainty and change (Li, 2022; Lang, 2023; Woetzel et al., 2021).

### **Roadmaps for Career Progression**

In 1532, Machiavelli expounded the perils and uncertainty of initiating a change in the order of things in his political treatise, *The Prince*. In 2022, Nordgren and Schonthal presented recommendations on “overcoming the resistance that awaits new ideas,” including how roadmaps “overcome ambiguity, cut down on the cost of exploration and clear a path to action” (Nordgren & Schonthal, 2022, p. 89). Paraphrasing an example describing the effectiveness of a “roadmap” to bolster tetanus inoculations:

Psychologists were asked to design a message to convince people to get a tetanus shot and created a variety of messages based on different theories of persuasion. One emphasized benefits of the vaccine; another stressed the risks and life-threatening consequences of the disease; yet another simply showed a map highlighting a local clinic where people could get a tetanus shot and prompted people to find a time in their schedule that week to stop by the clinic. 28 percent of people who received the roadmap message got a tetanus shot. (Nordgren & Schonthal, 2022, pp. 87-88)

Employers can use roadmaps to eliminate the disconnect between worker and employer perceptions of skilling opportunities (Career Institute, 2023, slides 46, 47, and 48). To create and preserve a competitive edge, workers must embrace a continuous process of learning, skill acquisition, and adaptability (Bilotserkovets et al., 2021). To create an appropriate learning environment, educators are rethinking pedagogy and transitioning toward interactive, dynamic learning environments (Bilotserkovets et al., 2021). Strategies include designing skills-aligned training curricula to bridge the skills gap between workforce knowledge and industry needs and use data to monitor implementation (Smith et al., 2023).

### **Example: Curriculum Map**

During the Online Learning Consortium (OLC) Innovate 2023 Virtual Conference, April 3-6, 2023, Mary Elizabeth Smith, Learning Innovation Strategist at University of Phoenix, Shelly Hodges, University of Phoenix, and Eve Krahe Billings, Dean, Academic Innovation and

Evaluation at University of Phoenix, discussed their initiative to “close the skills gap for students between higher ed and industry needs by mobilizing stakeholders across the university, including those outside the classroom” (Smith et al., 2023, abstract). This approach used Lightcast labor market data to identify skills and curriculum maps to align one skill to one outcome. The speakers detailed “what steps we took to successfully vision, design, and implement a skills-aligned curriculum framework focused on career identification and development across all academic programming at the University” (Smith et al., 2023, abstract). Dr. Billings’ response to a chat box inquiry on how employers can use this information to reskill and upskill accentuated the importance of collaboration: “There’s a strong connection that can be made between the groups that reach out to community partners and let them know what offerings the university has available to upskill. It’s also the university’s responsibility to be comfortable iterating that curriculum to reflect what that employer partner might need” (E. Billings, personal communication, April 4, 2023).

Additional strategies employers may consider to train, reskill, and upskill employees include tuition reimbursement, on-the-job training, and engaging training experts to deliver focused content to staff (Li, 2022). The SkillsCommons.org repository is the world’s largest open library of workforce training materials designed for 21st century employment (Lumadue & Fieth, 2023; SkillsCommons, 2023). The U.S. Department of Labor’s Trade Adjustment Assistance Community College and Career Training (TAACCCT) program created a free and open online library called SkillsCommons containing free and open learning materials and program support materials for job-driven workforce development. The \$1.9 billion investment by the U.S. Department of Labor produced a comprehensive collection of workforce-related Open Educational Resources (OER) created by over 700 community colleges across the nation, with

8.7 million downloads as of April 8, 2023. Employers can use SkillsCommons materials to continuously reskill, upskill, and maintain workforce readiness.

**Example: SkillsCommons.org**

During the Online Learning Consortium (OLC) Innovate 2023 Virtual Conference, April 3-6, 2023, Rick Lumadue, Associate Director Public Relations at California State University - Long Beach, Maria Fieth, Program Manager responsible for partnership development for California State University-MERLOT SkillsCommons, and Gerry Hanley, Executive Director - MERLOT at California State University - Long Beach | MERLOT/ SkillsCommons described how MERLOT-SkillsCommons, Ohio TechNet (OTN) and education-industry partners are modeling innovative strategies to fill in-demand, skilled jobs in advanced manufacturing. Ohio TechNet (OTN) is a consortium of career technical centers, Ohio Technical Centers, community colleges and universities that have partnered with The Ohio Manufacturers' Association (OMA) and other state and national partners to make Ohio a leader in solving our manufacturing workforce shortage.

To build Ohio's manufacturing talent pipeline, the Ohio Manufacturing Workforce Partnership (OMWP) is leading a statewide initiative to upskill 5,000 Ohioans with innovative earn-and-learn (apprenticeship) strategies. OMWP is a collaboration between Ohio TechNet (OTN), a consortium of Ohio's community colleges and other post-secondary education institutions, and The Ohio Manufacturers' Association (OMA), which facilitates the statewide network of manufacturer-led regional sector partnerships. OMWP's earn-and-learn programs are currently supported by the U.S. Department of Labor (USDOL), through its Scaling Apprenticeship



Through Sector-Based Strategies initiative, which provided a \$12 million grant (Lumadue et al., 2023, abstract).

Employers seeking resources to train, reskill, and upskill employees may search the web-based repository and download up-to-date and complimentary syllabi, rubrics, and program materials at SkillsCommons.org (Lumadue et al., 2023). Benefits include (Lumadue et al., 2023, slide 5):

- Accelerate implementation of capacity building programs with ready and recommended curriculum and program support materials
- Deliver evidence-based, vetted, content acquired across more than 700 colleges.
- Reduce costs by reusing/revising open resources
- Quickly and reliably fill gaps in projects with proven products and services

Consulting guidance and support in identifying project-specific resources are available to expedite the adopt/adapt process.

## Table 8

*Open Library of Workforce Development Resources [www.skillscommons.org](http://www.skillscommons.org)*



*Note:* Permission requested on 4/8/2023; response pending. Used with permission, Slide 4, Lumadue, Fieth, & Hanley. (2023, April 5). *Building bridges between jobs and people: Facilitating collaboration to address workforce gaps*. Online Learning Consortium (OLC) Innovate 2023 Virtual Conference, April 3-6, 2023.

Communication is key to success. Employers need to develop reskilling and upskilling training programs, publicize the initiatives, and monitor employee participation to ensure all staff are trained, as appropriate: “Most importantly, all kinds of support provided by enterprise resources should be publicized at the appropriate time to enhance employees’ perception of organizational support and promote it” (Jia-Jun & Hua-Ming, 2022, p. 8).

**Table 9**

*Worker/Employer Perceptions – Roadmaps to Opportunity*

<b>Worker Perception</b>	<b>Employer Perception</b>	<b>Opportunity</b>	<b>Roadmap</b>
A lack of clear pathways for career progression is the main reason Americans feel held back in their careers (Career Institute, 2023, slide 43).	84% say their company makes it clear how new skills can lead to growth/reward.	Employers must <b>communicate</b> to employees that new skills lead to career progression and <b>launch</b> training.	Map skills to outcomes; one skill to one outcome (Smith et al., 2023).  SkillsCommons.org syllabi and coursework to develop training.
75% say they are seeking skills development opportunities/certifications	29% say they do not invest in reskilling or upskilling programs because of limited employee interest and lack of time/resources for hands-on training programs.	Employers must <b>commit</b> to training existing staff, <b>motivate</b> employees to engage in life-long learning and <b>launch</b> training.	Map skills to outcomes; one skill to one outcome (Smith et al., 2023).  SkillsCommons.org syllabi and coursework to develop training.
43% of employees believe their employers offer/plan to offer mentorship programs.	70% of employers say mentorship programs are currently offered/going to be	Employers must <b>communicate</b> to employees that workforce mentorship programs	Incorporate web-based resources such as Ensher (2017) on LinkedIn.

Worker Perception	Employer Perception	Opportunity	Roadmap
	offered to employees.	exist, <b>clarify</b> participation procedure, and <b>launch</b> mentorship programs.	
<p>62% say they need support learning new skills.</p> <p>60% say they need support seeking growth opportunities.</p> <p>58% say they need support seeking out training programs to get ahead in their career.</p> <p>54% say they need support seeking out education programs to get ahead in their career.</p>		Employers must <b>commit</b> to training existing staff, <b>motivate</b> employees to engage in life-long learning through incentives, and <b>launch</b> training programs.	Give employees Internet access, time, and tuition support to complete training (Li , 2022).

*Note: Adapted from “The University of Phoenix Career Optimism Index™ 2023: Survey of U.S. Workers + Employers, slides 43, 46, 47, 48, by Career Institute, 2023, University of Phoenix.*

## Conclusion

As presented in the 2023 Career Optimism Index, by investing in employees' professional development, mental health, mentorship, and deeper engagement within their organizations, employers can channel workers' optimism in their own abilities to their current place of work, benefitting both businesses and their workforces. This white paper contributes to existing literature on the importance of training, skilling, reskilling, and upskilling by providing roadmaps to eliminate worker/employer disconnects, promote career progression, and create a future-ready workforce. Collaboration between educators and employers to align curricular,

extra-curricular, and training materials with Industry 4.0 requirements can transform optimism into career progression.

## References

- Akkermans, J., & Hirschi, A. (2023). Career proactivity: Conceptual and theoretical reflections. *Applied Psychology*, 72(1), 199-204.
- Ayoobzadeh, M. (2022). Freelance job search during times of uncertainty: Protean career orientation, career competencies and job search. *Personnel Review*, 51(1), 40-56.
- Bilotserkovets, M., Fomenko, T., Kobzhev, A. Berestok, O., Shcherbyna, Y., Krekoten, O., & Kurinnyi, A. (2021). Dual nature of students' knowledge formation in the pandemic period: Pedagogical and psychological aspects. *Romanian Journal for Multidimensional Education / Revista Romaneasca Pentru Educatie Multidimensionala*, 13(3), 246–261. <https://doi.org/10.18662/rrem/13.3/450>
- Career Institute® (2023). *Career Optimism Index® study*. University of Phoenix. <https://www.phoenix.edu/content/dam/edu/career-institute/doc/2023-uopx-career-optimism-index-study-research-findings-dma-snapshots.pdf>
- Chapman, C. (2023, April 6). Can older workers boost retention? *LinkedIn News*. <https://www.linkedin.com/news/story/can-older-workers-boost-retention-5598556/>
- Dondi, M., Hieronimus, S., Klier, J., Puskas, P., Schmutzner, D., & Schubert, J. (2020, February 7). A government blueprint to adapt the ecosystem to the future of work. *McKinsey: Public & Social Sector Report*. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/a-government-blueprint-to-adapt-the-ecosystem-to-the-future-of-work>
- Dondi, M., Klier, J., Panier, F., & Schubert, J. (2021, June 25). Defining the skills citizens will need in the future world of work. *McKinsey: Public & Social Sector*. <https://www.mckinsey.com/industries/public-and-social-sector/our-insights/defining-the-skills-citizens-will-need-in-the-future-world-of-work#>
- Ensher, E. (2017). *Developing a mentoring program*. LinkedIn. [https://www.linkedin.com/learning-login/share?account=69178410&forceAccount=false&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Fdeveloping-a-mentoring-program%3Ftrk%3Dshare\\_ent\\_url%26shareId%3DSRtMkaSeQ76kxPNGU6dAYg%253D%253D](https://www.linkedin.com/learning-login/share?account=69178410&forceAccount=false&redirect=https%3A%2F%2Fwww.linkedin.com%2Flearning%2Fdeveloping-a-mentoring-program%3Ftrk%3Dshare_ent_url%26shareId%3DSRtMkaSeQ76kxPNGU6dAYg%253D%253D)
- Errick, K. (2023, April 5). Paradigm shift: Recruiting for lifelong careers or public service stints. *Nextgov.com*
- Ge, X., Gao, L., & Yu, H. (2023). A new construct in career research: Career crafting. *Behavioral Sciences*, 13(1), 49.

- Hirschi, A., Zacher, H., & Shockley, K. M. (2022). Whole-life career self-management: A conceptual framework. *Journal of Career Development, 49*(2), 344-362.
- Jia-Jun, Z., & Hua-Ming, S. (2022). The impact of career growth on knowledge-based employee engagement: The mediating role of affective commitment and the moderating role of perceived organizational support. *Frontiers in Psychology, 13*, 805208.
- Kolb, D. A., Macintyre, J. M., & Rubin, I. M. (1979). *Organizational psychology: A book of readings*. Prentice-Hall.
- Lang, J. (2023). Workforce upskilling: can universities meet the challenges of lifelong learning?. *The International Journal of Information and Learning Technology*. doi/10.1108/IJILT-01-2023-0001/full/html
- Li, L. (2022). Reskilling and upskilling the future-ready workforce for industry 4.0 and beyond. *Information Systems Frontiers*, 1-16.
- Lumadue, R., Fieth, M., & Hanley, G. (2023, April 5). *Building bridges between jobs and people: Facilitating collaboration to address workforce gaps*. Online Learning Consortium (OLC) Innovate 2023 Virtual Conference, April 3-6, 2023.
- Mainga, W., Murphy-Braynen, M. B., Moxey, R., & Quddus, S. A. (2022). Graduate employability of business students. *Administrative Sciences, 12*(3), 72-107.
- McKinsey. (2022, February 25). Look inward, not outward. *Talent – Jobs*. <https://www.mckinsey.com/featured-insights/coronavirus-leading-through-the-crisis/charting-the-path-to-the-next-normal/look-inward-not-outward>
- Moss, J. (2021). *The burnout epidemic: The rise of chronic stress and how we can fix it*. Harvard Business Press.
- Nordgren, L., & Schonthal, D. (2022). *The human element: Overcoming the resistance that awaits new ideas*. Wiley.
- Pradhan, I. P., & Saxena, P. (2023). Reskilling workforce for the Artificial Intelligence age: Challenges and the way forward. In *The Adoption and Effect of Artificial Intelligence on Human Resources Management, Part B* (pp. 181-197). Emerald Publishing Limited.
- Robinson, D., Perryman, S., & Hayday, S. (2004). *The drivers of employee engagement*. Institute for Employment Studies
- Schwab, K., & Zahidi, S. (2020, October). *The future of jobs report 2020*. World Economic Forum, October 2020. [https://www3.weforum.org/docs/WEF\\_Future\\_of\\_Jobs\\_2020.pdf](https://www3.weforum.org/docs/WEF_Future_of_Jobs_2020.pdf)

- Simbula, S., Margheritti, S., & Avanzi, L. (2023). Building work engagement in organizations: A longitudinal study combining social exchange and social identity theories. *Behavioral Sciences, 13*(2), 83.
- SkillsCommons. (2023). <https://www.skillscommons.org/>
- Smith, M. E., Hodges, S., & Billings, E. K. (2023, April 4). *Curriculum to careers: Radical collaboration in assessment, analytics, and design*. Online Learning Consortium (OLC) Innovate 2023 Virtual Conference, April 3-6, 2023.
- Tortorella, G. L., Saurin, T. A., Hines, P., Antony, J., & Samson, D. (2023). Myths and facts of Industry 4.0. *International Journal of Production Economics, 255*, 108660.
- Underdahl, S. L. (1989). *The soul of work: A quest for the transcendent*. ProQuest Dissertations.
- Valcour, M. (2013, July 15) Craft a sustainable career. *Harvard Business Review*. <https://hbr.org/2013/07/craft-a-sustainable-career>
- Waheed, A., Waheed, S., Ahmad, N., & Karamat, J. (2023). Work engagement and organisation performance: The mediating role of innovative work behaviour and moderating role of perceived distributive fairness in manufacturing industry of Pakistan. *International Journal of Business Performance Management, 24*(1), 47-72.
- Wang, X. H., Wang, H. P., & Lai, W. Y. (2023). Sustainable career development for college students: An inquiry into SCCT-based career decision-making. *Sustainability, 15*(1), 426.
- Whiting, K. (2020). *These are the top 10 job skills of tomorrow – and how long it takes to learn them*. World Economic Forum, October 21, 2020. <https://www.weforum.org/agenda/2020/10/top-10-work-skills-of-tomorrow-how-long-it-takes-to-learn-them/>
- Woetzel, J., Seong, J., Leung, N., Ngai, J., Chen, L. K., Tang, V., & Wang, B. (2021). *Reskilling China: Transforming the world's largest workforce into lifelong learners* (p. 12). McKinsey Global Institute.