THE NEW LEARNING ECONOMY AND THE RISE OF THE WORKING LEARNER
AN ANTHOLOGY OF RECENT EVIDENCE
OCT 2016

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FOREWORD

We are fortunate to have the wisdom of diverse players, networks, methods, and perspectives as we work together to build a field that integrates working, learning, and living. This includes ACT Foundation Board Members, ACT Foundation Aces, National Network of Business and Industry Association members and consultants, ACT Foundation Executive Advisory Council personal efforts and connections, anchor partners like the Institute for the Future, Georgetown University Center on Education and the Workforce, Innovate+Educate, ACT, Inc., our advisors, and thoughtful intellects at Gates, Joyce, Lumina, and Walmart Foundations. Thank you for your support in building a safe zone for discussion, experimentation, and prototyping to support working learners.

ACT Foundation (2012–2016) and the ACT Center for Equity in Learning work together to develop strategic approaches to support working learners in their journeys toward successful careers and lives. We support low-income working learners age 14-24 in their journeys by exploring, expanding, and providing broader opportunities for combining working and learning for life satisfaction.

OUR MISSION IS TO HELP PEOPLE ACHIEVE EDUCATION AND WORKPLACE SUCCESS.

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Informing to Influence | Make the case and communicate evidence that informs, inspires, and influences decision making.
Expanding Options | Generate and incubate approaches to connecting work and learn experiences with learning needs.
Catalyzing Action | Mobilize working learners, employers, and education practitioners to demand and scale innovative solutions for work-learn-life success.

TABLE OF CONTENTS
Emerging Trends in Working and Learning 7
The Evolution of a New Learning Economy 14
The Work vs Learning Conflict 23
Hiring in the New Learning Economy 24
Building Work and Learn Options 27
Future Skills for Work and Learn Options 36
The Future: Work and Learn Framework 42

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INTRODUCTION

The rise of the working learner in the New Learning Economy signifies a dramatic shift in the way we think about working and learning in life. Historically, research has focused on working and learning separately following parallel paths with little or no intersection. In addition, just like any other economy, the new learning economy operates at many different levels: global, national, state, regional, and local. This anthology provides a synthesis of recent evidence that sheds light on how these work and learn paths coincide at all levels to create a new reality on the future of working and learning.

Working learners are individuals who work for pay and learn towards a credential at the same time. This process of learning takes on many forms, from formal education to skills training to personal development. Today’s working learners are highly motivated by opportunities that integrate and support their living, learning, and working worlds. Learning is no longer an activity that only takes place in limited, formal settings; instead it has evolved and now dominates and connects all other aspects of life. For working learners, learning occurs continuously and simultaneously with working and living. This highly integrated new environment of living, learning, and working demands high levels of performance, which translates into significant economic opportunity for individuals who embrace this change and navigate it well. Conversely, for those working learners who don’t or can’t, the continued gap between the well-off and poor will continue to grow.

We believe working learners represent the greatest opportunity for increased economic mobility, equity, and growth in the next century. ACT Foundation chose to improve working learners’ lives and opportunities by investing in new research to better understand the trends, dynamics, barriers and promising models to support the rise of the working learner. The New Learning Economy provides working learners with improved access to relevant working and learning opportunities, better connections to work pathways, clearer and more attainable learning pathways, and support to increase their overall life satisfaction. The primary focus of ACT Foundation was to leap ahead these new trends. Our premise is that by leaping ahead of the New Learning Economy we can reduce the gap between the rich and the poor and increase the quality of life for underserved working learners. With so many stakeholders wisely focused on evolving the institutions of today, our aspiration was to look into the future and reverse engineer from there – a future where the direct connections between working and learning will not be a luxury, but a necessity.

To this end, ACT Foundation sought four key investment areas of transformation most likely to effect change and support a vibrant, self-sustaining learning economy:

- ACTIONABLE EVIDENCE – LEVERAGING RESEARCH TO DRIVE CHANGE
- DEMAND – AGGREGATING LIFE, LEARNING AND LABOR MARKET NEEDS
- SUPPLY – ACTIVATING WORKING LEARNERS TO TAKE OWNERSHIP OF THEIR OWN JOURNEYS
- INNOVATION – OPTIMIZING THE BEST MARKET-DRIVEN SOLUTIONS TO SUPPORT WORKING LEARNERS.

This anthology provides a summary of the recent research evidence and a new emerging framework that supports the vision of a New Learning Economy where everyone is valued for their ability to perform, and where everyone has an equal opportunity to achieve greater life satisfaction for themselves and their families.
Emerging Trends in Working and Learning

Dramatic shifts have occurred in “working and learning” since the 1960’s when 60% of students in higher education did not work at all.

- Today, Half of all students (48%) report working for pay outside of the home during high school and these students are roughly split between those who have worked fewer than 15 hours in their current or most recent job (23%) and those who have worked 15 hours or more (25%).

- Currently, 85% of all full-time undergraduate working learners who are aged 16 to 24 work more than 20 hours per week.

College enrollment increased from 2 million students to 20 million students over 60 years with much of the growth driven by the older, non-traditional student population. The contemporary “average” college student works an average of almost 30 hours per week with at least 75% of higher education students currently working at least part-time.

Postsecondary graduation rates have dropped even as enrollment numbers increased. Only 52.9% of students who started at two- and four-year institutions in the fall of 2009 had graduated at the end of six years. This is a drop from 55% for students who started in 2008, and 56.1% the year before. This decrease indicates that while course-taking is a needed activity, working learners place more value on taking the right

Major Sources

(A) Learning While Earning: The New Normal
Georgetown University
Anthony P. Carnevale, Nicole Smith, Michelle Melton & Eric Price (2015)

(B) Getting Ahead, Getting Through, or Getting By? An Examination of the Experiences and Prospects of High School Working Learners
Sarah Blanchard (March 2016)
ACT Foundation Research Report
IN THE 21ST CENTURY GLOBAL ECONOMY, IN-DEMAND SKILLS HAVE BECOME THE MOST IMPORTANT CURRENCY TO SUCCEED IN A RAPIDLY CHANGING JOB MARKET.

Practical benefits of work-and-learn programs

- Reduced student loan debt
- Increased rates of employment & retention
- Improved labor market outcomes, such as higher wages

College and career readiness definitions have been adopted by 75% of the states over the last decade.

Real-time hiring and the rise of freelancing

Today, working learners are more concerned about gaining work experience and acquiring in-demand skills than paying for higher education tuition costs.

We are now in a new age of real-time hiring. Time to hire has dropped from around three weeks to hire to an average of three days to hire. Upwork predicts that within the coming years it will be possible to hire in minutes or less. With work and learn options that allow professionals to be available 24-7-365, the biggest barriers to hiring - bandwidth and the availability of specific skills - is disappearing quickly.¹

Only 42% of Americans say that a college degree is necessary for success in the workforce, a 13 point drop from 2009. Yet policymakers and higher education experts believe that a college education is critical for the continued economic success of individuals, families, and the nation. This divide is caused by a growing mistrust of postsecondary institutions, as working learners question the return on their investment and the practical benefits of a degree in the current labor market. This pressure is propelling the evolution of the new Learning Economy.²

College students also work because it’s part of the culture in which they were raised, because their parents choose not to fully finance their education, or due to other preferences related to debt, financial independence, or lifestyle. Regardless of their reasons, all working learners share the common experience of simultaneously navigating their higher education and engagement in the workforce, which can be a struggle.

The “work-and-learn” trend is no longer limited to just non-traditional older or poor students and is becoming more prevalent with the younger, traditional college student population due to rising tuition, lack of holistic financial support systems, and the increase in

The traditional Bachelor’s degree-centric model has limited utility in a world focused on workforce development.

Freelancing: A New Learn and Earn Opportunity

For the 53 million Americans who are freelancing and contributing more than $715 billion to the national economy, almost two out of three (65%) freelancers said freelancing as a career path is more respected today than it was three years ago.³ Freelancing is a field that values education and experience, which draws in younger working learners. Being able to learn while they freelance gives working learners the promise of increased pay and more clients as they progress. They are also uniquely positioned to learn from each other and are in a much better position to leverage social networks, digital platforms, and marketplaces to create the flexibility they need to work and learn simultaneously. The lifestyle of freelancing is tailor made for working learners that want to choose when, where and how much they work and when, where, and how much they learn.

Millennials have embraced the role of working learners, evidenced by 38% of Millennials working as freelancers, more than any other age group. This number will only continue to rise as the benefits of working and learning are further realized. 82% of Millennials are highly optimistic about the future of the freelance job market, no longer seeing it as a stepping stone to a salaried career, but instead believing that freelancing as a career is going to continue to improve.⁴
Real Quotes from Real Working Learners

**Significant Tradeoffs**

“If I choose learning, then I don’t get paid. If I choose working, then I get stuck in some rote dead-end job. I want both.”

**Attitudes Toward Debt**

“I want to pay for my education as I go rather than taking a gamble and accumulating debt and then hoping I can someday, one day pay it off.”

**Feel Isolated**

“It’s kind of impacts you mentally because you really don’t have much social interaction.”

**Have Real Time Returns**

“It feels good to know that I can pay for my phone. I can pay for my gas. I can pay for my clothes. I can pay for everything that I need.”

**Experience Unmet Needs**

“It would be great if colleges offered orientation specifically for non-traditional aged students.”

**Experience Major Time Constraints**

“It’s being pulled in 62 directions at once, every single day.”

**Different Motivations**

“There is a stigma to going back to college. It’s sort of frowned upon.”

“Society tells you if you have kids while you’re in school, your life is over and have to give up your dreams. I believe in the exact opposite.”

**Experience Stigmas**

“There is a stigma to going back to college. It’s sort of frowned upon.”

“Society tells you if you have kids while you’re in school, your life is over and have to give up your dreams. I believe in the exact opposite.”
FAST FACTS ON WORKING LEARNERS

- Most students are working. Students are working learners and working learners are students.
- Many high schoolers are already balancing their efforts between their education and their paid work.
- Going to college and working while doing so produces more long term potential than going straight to work after high school.
- Working while attending college hurts disadvantaged students the most.
- Working and learning simultaneously has benefits, especially when students work in jobs related to what they study.
- Young working learners (16-29) make very different decisions compared to mature working learners (30-54) when it comes to majors selected, hours worked, and career choices.

One-third of working learners are 30 or older.

More people are working full-time while in college. (40% of undergraduates, 76% of graduate students)

The high cost of college makes it almost impossible to work your way through college.

Students are working and taking out loans to pay for college.

WORKING LEARNERS

Wages after completing Bachelor’s degree:
- Wages above $42,000 per year: 9%
- Between $7,500 & $42,000: 42%
- Less than $7,500: 58%

Wages while enrolled:
- Wages above $42,000 per year: 10%
- Between $7,500 & $42,000: 8%
- Less than $7,500: 53%

Young Working Learners VS Mature Working Learners

<table>
<thead>
<tr>
<th>Young Working Learners</th>
<th>Mature Working Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disproportionately White</td>
<td>Disproportionately African-American</td>
</tr>
<tr>
<td>26% food and personal service occupations</td>
<td>12% food and personal service occupations</td>
</tr>
<tr>
<td>6% in managerial operations</td>
<td>17% in managerial operations</td>
</tr>
<tr>
<td>Majors: Social sciences, humanities, business, and other applied fields</td>
<td>Majors: Healthcare, business, and other applied fields</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>Certificate/Associate’s degree</td>
</tr>
<tr>
<td>Four-year colleges</td>
<td>Community colleges and for-profit colleges</td>
</tr>
</tbody>
</table>

*200% of poverty and below

SOURCES A (Georgetown University) and B (S. Blanchard)

“I know what my next step is. As long as I can get there and keep going on, that’s my kind of ambition.”

REQUIRES PERSEVERANCE
Behind the emerging learning economy are future forces that are driving the integration of learning exchanges into every aspect of our daily lives from working to living. These signals are driving the evolution of the new learning economy.

Some of the forces driving change toward a new global performance era include increased integration among key support systems, flexible and robust communications platforms, a culture of efficiency and collaboration, and new business models that focus on outcomes and overall performance rather than resources or products. For example, the development of internet and telecommunications are fundamentally changing how we live, learn, and work. These developments require an increasingly productive, literate, and learning-oriented workforce that can take advantage of the economic growth opportunities that arise. The separate silos of working, learning, and living are no longer separate!

These technological and cultural forces create a circular, rather than linear, model in which sustainability and renewal are the primary goals. Static programs of education too often provide degrees that become obsolete almost as soon as they are obtained. Renewable and sustainable models of learning allow for opportunities to continually renew and refresh the knowledge and skills needed to be competitive in the new learning economy. These forces are the underlying technological and social shifts that are destabilizing the learning landscape of today and driving the formation of the new learning economy.

Future forces are shaping the way we work, learn, and live.

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**Learning Commons** | “The tragedy of the commons” is reversed in the new learning economy because of renewable and sustainable learning enabled by new digital resources. New commons, especially commons of learning resources, lay the groundwork for all kinds of new exchanges.

**Maker Mindset** | A do-it-yourself ethos is creating an entrepreneurial approach to working, learning, and living. This maker mindset becomes a do-it-ourselves ethos as digital and physical spaces bring us together in new ways.

**Digital Natives** | Those born after 1990 are growing into adulthood as natives of the digital world, with smart devices and the internet at their fingertips. From media literacy to computational thinking, they are pioneering a new economy of digital skills.

**Coordination Platforms** | Platforms designed to match people with tasks and resources, for money or simply for engagement, are forging new ways to work and learn. These platforms will rapidly increase the marketplace choices for working learners.

**Decoded Brain** | Advances in neuroscience and behavioral science are generating new techniques and tools for optimizing learning and organizing work tasks. These tools, in turn, are changing the way we think about the entire enterprise of working, learning, and living.

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**MAJOR SOURCES**

(C) Learning is Earning in the National Learning Economy
ACT Foundation and Institute for the Future (2015)

(D) National Learning Economy: The NEW American Dream
ACT Foundation Vision Paper (2014)
The creation of new innovation zones for working learners

There are eight new zones within which working learners will innovate and shape their own futures over the coming decade. For decades, degrees, grades, and resumes have been the traditional tokens of value or currencies in the workplace, but that is changing. The value of these currencies is shifting as the pace of innovation quickens, laying the groundwork for the new economy—a New Learning Economy. In this emerging learning economy, new underpinnings provide the basis for learning itself to become a currency for success and life satisfaction. To navigate the terrain and understand the new currencies, the business and education worlds will need to reorient themselves to what’s possible.

These eight innovation zones represent the most important contours of this emerging topography.

1. **UNBOUND RESOURCES**

   Today, the rapid growth of online knowledge resources, whether for fee or free, is creating an abundance of learning resources in a variety of formats. These range from massively open online courses (MOOCs) to live-streaming experiences and augmented realities that offer both structured and informal learning opportunities. Such resources can jumpstart workplace advancement and earnings growth. However, in a world of unbound resources, working learners will need road maps that connect the dots between learning assets and the career opportunities they open.

2. **DIGITAL-PHYSICAL BLENDS**

   Mobile devices, sensors, and geolocation tools are rewriting the scripts for how we use physical spaces and objects to learn and work. Combined with the abundance of online content, these tools are building learning exchanges into every space, creating sensory-rich experiences that outperform traditional classroom learning and traditional workplace environments.

3. **CONTINUOUS LEARNING FLOWS**

   The traditional model of education is episodic: learning takes place in a particular setting (such as a classroom), at a particular life stage (usually childhood and young adulthood), and with specialized teachers (teaching disconnected curriculum). This type of episodic education simply doesn’t prepare working learners for a global economy built on innovation. Over the next decade, with advances in mobile and wearable technologies, learning will spill over into a working learner’s daily life. Digital flows will be designed to help people learn as they go through their days and will turn every exchange with friends, family, customers, or co-working learners into a potential moment of new mastery.

4. **PERSONALIZED EXPERIENCES**

   One size does not fit all and every working learner has a unique profile. A combination of computer analytics and new human attitudes will help adapt learning and working to individual needs and circumstances. Already, new platforms are beginning to offer tailored learning paths based not on a standard curriculum for a fixed job objective but on a dynamic analysis of where learners are as individuals and where they might need help.

The most successful people will be those who learn how to learn **TOGETHER**.
In a world of big data, advanced analytics, and growing reputation markets, feedback is getting ever more nuanced. In learning, in work, and in life, people no longer have to depend on blunt instruments like institutional performance reviews and self-help checklists. More and more they will get detailed personalized feedback that they can act on in real time. Many of the leading-edge performance tools will borrow from the realm of gaming, where players can fail many times but are motivated to improve in order to achieve higher levels of performance. Similarly, real-life performance tools will replace grades with compelling learning incentives and high-resolution metrics for the complex set of skills that today’s work and life challenges require.

An algorithm is a computer program, often one that solves a problem and discovers a hidden pattern. They do this by sorting through digital data trails to discover individuals, institutions, and opportunities that match a person’s unique profile. Over the next decade, these kinds of algorithms will change how people learn, work, perform daily activities, and get what they want. The tasks performed for pay may be assigned by matching algorithms that track past performance, reputations, social networks, and even individual learning styles. Perhaps most important, these matching algorithms and the digital trails they mine are the currency that will connect people across institutional silos if they use them well.

The way problems are solved, whether they are complex scientific questions or just the challenges of everyday life, is by shifting from individual work or even teamwork, to work involving large networks of people, often around the world. Growing up in a world of constant connectivity, today’s young people will take for granted that they can turn to their networks for guidance, knowledge, and smart solutions to problems they would never tackle alone. Mobile devices make it possible to carry these networks - always on and always available - in a pocket. In this environment, individual performance and individual IQ will take second place to network performance and network IQ. Ultimately, the most successful people will be those who learn how to learn together.

Success in the learning economy is all about building personal brands as working learners and citizens of the communities that matter most to each person. Reputation and digital trails will start to carry more weight than college degrees and one-page resumes of employment as the market begins to track learning that happens anywhere and as working learners contribute their own knowledge and resources to online communities. Additionally, work performance in global networks will be highly valued and will determine the likelihood of getting hired for another task.

Innovations in credentialing will lay a new groundwork to better represent individual personalities and capabilities with new kinds of reputation markers such as nanodegrees and digital badges as well as digital trails that document perhaps the most essential skill in the new learning economy - a working learner’s social intelligence.

Barriers continue to exist in integrating living, learning, and working. New solutions are needed for reducing the struggles of working learners through increased collaboration and coalition building across global economic development, workforce development, and education systems.

The New Learning Economy is reinforced by investments in strategies and solutions that are evidence-based, market driven and highly optimized to support working learners. These strategies and solutions require partnerships, policies, and programs that facilitate scaling these innovations to the global market.

Limited access to technology
Antiquated policies
Infrastructure issues
Inflexible scheduling
Lack of alignment between curriculum & industry needs
Lack of incentives

THE MOST ESSENTIAL SKILL MAY BE SOCIAL INTELLIGENCE
LEARNING IS EARNING IN THE NATIONAL LEARNING ECONOMY

Looking ahead to the future is a way to make better choices today. This map helps us see, at a glance, how eight innovation zones are shaping the emerging learning economy and will contribute to overall life satisfaction in the coming decade.

Find the interactive Learning is Earning Map to dig deeper and to explore the possibilities.
As we look into the future of working and learning, we must focus on “moving mind to market” and develop innovations that help working learners increase their learning and economic trajectories so that they can achieve greater success in their daily lives and careers.

**THE WORK VS. LEARNING CONFLICT**

*Fuels Disruption of Traditional Education Experiences*

High school working learners are at a crossroads. Engagement with the labor force no longer begins after enrolling in postsecondary education and training programs. Forty-eight percent of high school students report working for pay outside of the home during high school. Of this 48%, there is an even split between those that worked less than 15 hours/week and those that worked more than 15 hours/week.

**THOSE STUDENTS WITH HIGHER ACT COMPOSITE SCORES WERE LESS LIKELY TO BE WORKING LEARNERS**

Students who expect to work intensely while attending postsecondary education and are very sure of their career plans after postsecondary education are more likely to be working learners.

There is a shift in both industry and government policies that support the successful integration of working and learning through increased investments in apprenticeships, paid internships, public/private training, education partnerships, and other innovative solutions. Successful integration of living, learning, and working leads to a foundational base for a healthy and robust learning economy that is focused on performance and career success.

The “work vs. learning” conflict has major implications for how we design and deliver training and curriculum. It must be adaptable to a rapidly changing economy and effectively support an agile workforce. In the new “learning economy,” working, learning, and living must become increasingly integrative and supportive in ways that empower and improve individual performance rather than hindering it. In addition, global workforce training and development systems that co-exist with the traditional education system are beginning to emerge and evolve.

**MAJOR SOURCES**

(E) *Work/Learning Balance: Is It Possible for Students?*  

(F) *Getting Ahead, Getting Through, or Getting By? An Examination of the Experiences and Prospects of High School Working Learners.*  
Hiring in the New Learning Economy

In order to secure the most qualified candidate, many organizations that are hiring continue to select, adopt, and use hiring practices that focus on relatively traditional and narrow definitions of effectiveness with little or no measurement of outcomes.

Adaptation is essential to compete in the New Learning Economy. Rapid change and economic uncertainty incentivize employers to seek out individuals with a demonstrated commitment to lifelong learning. But, for young working learners, pursuing credentials or advanced training may be at odds with their ability to provide for themselves and their families through hard work. Instead of a competitive advantage, this growing pool of job seekers may experience barriers in hiring via practices firms use to select candidates. Three key conflicts inherent to these practices undermine the competitiveness of firms and the needs of potential young working learners in the new learning economy.

3 Key Conflicts in HR Practices and Young Working Learner Needs

1 Uniformity in hiring practices and limited metrics: These constrain the ability of firms to explore innovative, evidence-based improvements in hiring. Organizations are largely in the dark about whether current hiring criteria—which may undervalue the educational and work experiences of young working learners—actually result in hires that are more successful in the long run. Strategically engaging young working learners in hiring offers a promising direction for innovation in human resources.

2 Shifting paradigm of education and work as separate and sequential: Despite the changes brought on by the New Learning Economy and ongoing struggles to identify adequate talent, firms continue to make hiring decisions on the basis of educational attainment.

3 Achieving greater diversity through young working learner inclusion: Contemporary hiring practices, which are time and labor intensive and favor the social networks of established employees, may inadvertently undermine efforts to promote diversity within organizations, marginalizing young working learners.

ACT Foundation focuses on ensuring that the New Learning Economy cultivates the success of working learners, businesses, and the country, especially assisting underserved working learners to leap forward. A fundamental approach to achieving this balancing act over the last two decades involves employer-based support for employees’ learning pursuits.
4 Dimensions of Learning Formality

1. **LOCATION** is where learning takes place. This can be school, work, community, or home. Within a work setting, learning can happen off or on the job.

2. **PROCESS** is how learning takes place. This can include instructor-led learning, learner-led approaches, or learning that occurs within the context of an activity or experience.

3. **CONTENT** is the substance of what is learned. This can be conveyed through prepared curriculum, virtual, or real-time experience.

4. **PURPOSE** is the learner’s intentionality and awareness of learning. This can include whether learning is the primary focus of the activity or an incidental outcome of the activity.

Support Working Learners

- **LEARNING AND EDUCATION SUPPORT ARE CENTRAL AND ESSENTIAL INFLUENCES IN HELPING EMPLOYERS ACHIEVE ORGANIZATIONAL GOALS.**
- **ENTRY-LEVEL EMPLOYEES ARE THE MOST SUPPORTED BY EMPLOYERS WHEN SEEKING EDUCATION AND LEARNING OPPORTUNITIES.**
- **EMPLOYERS ARE HIGHLY FOCUSED ON ASSISTING EMPLOYEES IN PURSUING ADDITIONAL LEARNING AND EDUCATION REGARDLESS OF EMPLOYER-BASED FINANCIAL SUPPORT.**
- **FOCUS SHOULD BE ON THE MUTUAL BENEFIT FOR EMPLOYEE AND EMPLOYER RATHER THAN ASSUMING A ZERO-SUM GAME PERSPECTIVE (I.E., EMPLOYERS SHOULD NOT VIEW EDUCATION SUPPORT AS AN UNRECOVERABLE COST).”**

What does it mean to “Upwork?”

“There is an earth-sized talent pool out there, yet most businesses still limit their thinking to rigid hiring models of the Industrial Era. Upwork signals a new chapter of work in which people are able to hire quality talent—regardless of where the professional happens to be—in minutes. Freelancers were already earning $1 billion annually via Elance-oDesk; I predict they will earn $10 billion annually via Upwork within six years.”

Stephane Kasriel, CEO, Upwork

Skills and related work experience are essential not just for survival but also to continually build and rebuild one's knowledge, skills, behaviors, and talents over time in both settings and apply them to better one's lives. Learning opportunities are typically characterized by formal learning that takes place in classrooms, is taught by instructors, and leads to a degree. However, a vast amount of substantive learning occurs outside of formal schooling. Learning can be conceptualized as occurring along a continuum of formality, expanding traditional notions of learning to include the full range of possibilities that occur with informal learning experiences.
From the four dimensions of learning, two broad categories of informal learning emerge.

**Organized Informal Learning**

Organized informal learning is intentionally sought by learners, involves some type of curriculum or instructor, but does not lead to an educational credential; examples include non-credit learning, some types of work-based learning, volunteerism and service learning, communities of practice, and mentoring/coaching.

Everyday informal learning is unstructured and occurs in daily life across all settings with no curriculum, where the learner may or may not be aware of the learning; examples include learning via trial and error, learning by doing, modeling others, reading, and web searching.

**Work-Integrated Learning**

Work-Integrated Learning (WIL) focuses on working learner employment that are normally setup by their postsecondary institution, and are in their field of study with the goal of integrating what is learned in the classroom with what is learned through working. There are a variety of different frameworks that came out of WIL that propose different formats for combining work and learn. One framework emphasizes professional work experience with options of service learning, student teaching, and industry attachments. A framework put forth in 2002 included programs like placement, practicum, and fieldwork. In a 2011 study, Sattler developed a framework for WIL in Ontario that started with systematic training where learning takes place on the job. The work experience would be structured and would partner with institutions of learning.¹

WIL covers a wide variety of programs and experience, which ultimately makes it difficult to measure the many outcomes. Some of the frameworks allow for volunteer work, others do not make the project mandatory, and since they are institution based, few last longer than a semester, and some only last a few days. In a balanced work and learn framework, the work and learn need to equal out and be adaptable to life, instead of weighting – or sacrificing - one above the other. Today, instead of work and learn options being led only by institutions, with the rise of the working learner, changing economics, and new learning offerings, the trifecta of change is resulting in working learners building their own work and learn path that fits their working, learning and living needs.

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MAJOR SOURCES

(I) Reconceptualizing Learning: A Review of the Literature on Informal Learning
Michelle Van Noy, Heather James, Crystal Bedley (July 2016)

(J) Report on Learn and Earn Partnerships
Corporate Voices for Working Families (2012)

(K) Work and Learn in Action: Successful Strategies for Employers
National Network of Business and Industry Association (Nov. 2015)

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EXAMPLES OF INFORMAL LEARNING ACTIVITIES that broaden the conception of learning beyond traditional schooling

- Formal Learning
- Organized Informal Learning
- Everyday Informal Learning
WHY DOES LEARN & EARN WORK FOR BUSINESS?

- Business imperatives drive these partnerships and they are usually designed to meet bottom-line business needs
- Companies realize a range of returns on their investment, including higher employee retention, increased productivity, and enhanced reputation
- Successful partnerships serve employees' needs by offering flexibility and helping them balance the demands of work and school

WHO BENEFITS FROM LEARN AND EARN PARTNERSHIPS?

- Employers: through improved talent development and bottom-line contributions
- Employees: current and prospective
- Local economies: Better-skilled workforce
- Education providers: Gain strong business partners
- A range of companies across industry sectors and geographic areas

WHAT WOULD MAKE A MODEL WORK AND LEARN PARTNERSHIP?

- A corporate culture, starting at the top, that supports talent development and learning
- Other business practices that promote lifelong learning, including tuition assistance used as a talent strategy to encourage employees to pursue higher education
- Leveraging the expertise of strong education providers

WHAT ARE THE CHALLENGES & OPPORTUNITIES FOR WORK & LEARN PARTNERSHIPS?

- Large employers in multiple locations can find it challenging to implement local solutions, but successful models do exist
- Cultivating willing partners can be difficult, but partnerships provide a valuable source of talent
- Measuring success can also be challenging, but business decisions are data driven
- A clear business imperative, such as the need to stabilize a company's workforce
- A strong relationship between business and an education provider
- Relevant curriculum linked to a postsecondary credential and career advancement
- The ability to measure and track progress of the investment

KEY FINDINGS: WORK-AND-LEARN OPTIONS LED BY EMPLOYERS

Employer-led work-and-learns address these and other concerns:
Work-and-learns are a simple but radical idea that rebuilds the fundamentals of society in how we connect learning, working, and living. It is a bit like saving for retirement. Investment experts agree that it is always better to start investing early in life. The magic of compound interest means that a small amount invested early on will significantly outperform a large amount invested later in life. Similarly, connecting learning and working at a young age reduces overinvesting in education. Changes in both working and learning can also be made much easier than if working is postponed until after finishing a lengthy education.

Most work-and-learns are traditionally led either by an employer or a learning provider. For the poor, work-and-learns have been government or non-profit-led. The highest growth sector of work-and-learns includes neutral, third party-led offerings such as for-profit, short-term programs and boot camps, new-age unions, benefit corporations, and non-profits creating programs that bring together employers, learning providers, and working learners.

**Led by Employers**

It would benefit all companies to implement a plan that connects working and learning. Different types of work-and-learn options are similar to the choices we have when building an investment portfolio. It depends upon where you are in your life cycle which determines whether you invest heavily in stocks, bonds, or mutual funds. In a similar manner the employer’s work-and-learn portfolio depends upon the employer’s business needs and business cycle. Some work-and-learn options are more important to the nature of their business than others. For instance, in a company where future talent is critical, then it may be valuable to invest in an internship. For another business, it might be better to offer part-time jobs or apprenticeships that can be classified as “on the job training.” For a third company it might work best to institute working learner-friendly policies such as safeguarding class time, or tutorial services. A fourth example could be a company opting for diversity so a cooperative education program or corporate college might be the better fit. At different points of the business life cycle, the work and learn portfolio offerings may vary. Regardless of the force that drives the type of work and learn option that the employer provides, the option can be vital to the future of the company.

The National Network of Business and Industry Associations provides an excellent guidebook on popular work-and-learn models and offers tools and strategies to help bridge the gap between working and learning. They also present a list of questions to consider when designing a work and learn program.
The Working Learner Challenge

Employer and learning provider-led initiatives can look very different while trying to accomplish the same goal. The two leaders can approach a common goal from different perspectives, no matter how deep or light they want the work-and-learn experiences to be connected. There is a place for both leaders in this field, and both are necessary for the success of working learners.

The following forms of systematic training, structured work experiences, and institutional partnerships provided by postsecondary institutions can enhance the work and learn experiences of students during their studies.

- **FIELD EXPERIENCE**
- **MANDATORY PROFESSIONAL PRACTICE**
- **CO-OP PLACEMENTS**
- **INTERNSHIPS**
- **APPLIED RESEARCH PROJECTS**
- **SERVICE LEARNING**

The Higher Education Quality Council of Ontario provides an outstanding guide on work-integrated learning and offers information on how colleges and universities can implement effective structured work experiences into their educational programming.

**LOW TOUCH**

Work-and-Learn
- Less structured
- Low engagement/resources needed from the employer
- General career knowledge for the working learner

**HIGH TOUCH**

Work-and-Learn
- Very structured
- High engagement/resources needed from the employer
- Full immersion and career/industry knowledge for the working learner

SOURCE K
National Network of Business & Industry Associations
The careers of the future haven’t taken shape yet, and the skills they will require are not being systematically developed through our traditional educational structure. Education and training must urgently refocus and rethink what - and how - we expect our working learners to work and learn. The future is coming whether we are prepared for it or not, and those who are not prepared will struggle to survive, while those who are will thrive. It’s better to be prepared.

Research shows changes in the way people work and learn, and there are certain skills that are gaining importance as those changes solidify. These skills are often overlooked in current assessment methods but are increasingly seen as essential for long-term life and work success. Future skills directly connect to the National Network of Business and Industry Association’s Common Employability Skills (NNCES) and can be grouped in one of four categories: personal skills, people skills, applied knowledge, and workplace skills.

There needs to be a deeper and more dynamic relationship between the competencies taught in a particular curriculum and the competencies required to advance in a particular career. Competency-based education (CBE) and non-credit education represent new models for attaining credentials that could benefit both young and mature working learners. CBE is based on the mastery of competencies rather than on “seat time.” For working learners, the competency-based approach is a more harmonious combination of education and employment. Each competency is job-related and a working learner can apply it on the job as soon as it is mastered.

- **THESE NEW MODELS FOR ATTAINING CREDENTIALS HAVE ADVANTAGES FOR BOTH YOUNG AND MATURE WORKING LEARNERS.**

- **WORKING LEARNERS NEED STRONGER TIES BETWEEN THE WORLD OF WORK AND EDUCATION. AMONG ALL PROGRAMS FOR WORKING LEARNERS IN POSTSECONDARY INSTITUTIONS, LEARNING AND EARNING IS THE COMMON CURRENCY.**

- **CONNECTING POSTSECONDARY FIELDS OF STUDY AND DEGREES WITH LABOR MARKET DEMANDS IS STILL A WORK IN PROGRESS BUT THERE ARE INITIATIVES THAT HAVE PROVEN SUCCESSFUL.**

- **WORKING LEARNERS NEED COMPETENCY-BASED POSTSECONDARY CURRICULA THAT DRILL DOWN BELOW THE OVERALL DEGREE ATTAINMENT AND PROGRAMS OF STUDY TO THE COGNITIVE AND NON-COGNITIVE COMPETENCIES REQUIRED FOR THEM TO MOVE ALONG PARTICULAR CAREER PATHWAYS.**

The careers of the future haven’t taken shape yet, and the skills they will require are not being systematically developed through our traditional educational structure. Education and training must urgently refocus and rethink what - and how - we expect our working learners to work and learn. The future is coming whether we are prepared for it or not, and those who are not prepared will struggle to survive, while those who are will thrive. It’s better to be prepared.

**MAJOR SOURCES**

(L) Future Skills – Institute for the Future

(M) Common Employability Skills; National Network of Business and Industry Associations (July 2014)
People Skills

Successful working learners in the future must be “team players” that can work with others of both similar and diverse backgrounds effectively, by engaging in meaningful communication. Critical to that work will be cross-cultural competencies, social intelligence, and virtual collaboration.

It will be crucial for working learners to adapt cross-culturally, employing a blend of skills and contextual awareness to engage with people from other backgrounds, countries, and mindsets. As diversity in team makeup is more universally embraced as fuel for innovation, the ability to collaborate within a global team will be critical. Developing a cross-cultural competency will often call for working learners to independently assemble their own resources. It may also require coaches to train them how to appropriately maneuver within unfamiliar cultural contexts.

“Progress depends as much on our collective differences as it does on our individual IQ scores,” notes Dr. Scott E. Page, professor and director of the Center of the Study of Complex Systems at the University of Michigan.

Social intelligence deals with the new normal of digital relationships, where social media has fundamentally changed the ways people interact with each other. Successful working learners in the future will need to leverage online networks, crowdsourcing, and distributed teams who connect mainly via phone and the internet. This will become increasingly important as routine tasks become ever more automated and making human connections becomes an elevated job function.

The social intelligence skill works in concert with competencies in virtual collaboration, a rapidly expanding trend as the nature of work changes from location-based activity to more flexible, technology-enabled job functions that can be performed anywhere. In particular, working learners will have to find ways to ensure that physical isolation doesn’t erode collaboration and lead to social isolation. Companies will need to build tools and develop interaction techniques that build collegiality and reinforce the corporate culture.

Applied Knowledge

Employees of the future must be proficient analysts who can make logical conclusions. They have to be able to digest and use information by achieving literacy in mathematics, written communication, scientific methods, information technology, and critical thinking.

For instance, future employees must have the ability to quickly make informed decisions through novel and adaptive thinking. This will give working learners a competitive advantage in the forecasted unpredictability of the working environment. As machines take over previously white-collar jobs, a premium will be placed on people who demonstrate intellectual value as opposed to those skilled only in more common manual or administrative tasks. Increasingly, creativity and insight will become central skills that will make working learners stand out.

Working learners will need to process large amounts of information in short amounts of time. The ability to process that information will require skills in cognitive load management. Without these skills, the tremendous amount of data working learners will be exposed to every day can become overwhelming. Important information may be overlooked while other contextualizing information may be missed. At the same time, the massive amounts of information available could spark a revolution in productivity. The ability to turn the torrent of information presented into an asset, rather than a liability, will be critical.
Like the android Data in the *Star Trek, The Next Generation* series, machines will almost certainly be able to perform amazing computational feats, but will still not be able to compassionately apply human values and sentiments to challenges and opportunities. These “sense-making” skills will be important in the making of reasonable decisions tolerable by society. They will involve being able to place data in the context of what it will mean to actual human beings with feelings and souls.

“*If we ask what thinking is, so that we can then ask how to foster it, we encounter an astonishing and terrifying answer: we don’t know.*”

Jaron Lanier, Computing Pioneer

The living and workplace of the future will require the average working learner to solve problems and make decisions to a greater degree than ever before. This will require those working learners to be highly organized planners, with a strong understanding of business fundamentals, customer needs, and the capabilities of both existing and emerging tools and technology.

Not only is data going to be presented to people in more and more massive quantities, the forms that data will take will also continue to evolve. Already, we are seeing the emergence of new media based on technological advances, like smartphone apps, while other forms of new media are simply a contemporary “mash-up” of traditional media, such as the increasing use of infographics or games as communications vehicles. Skills in new media literacy will be central to a future working learner’s ability to separate fact from fiction as previous lines of demarcation in information delivery blur and as working learners will also come under increasing pressure to use more effective and complex communications tools, like video production and data visualization.

Working learners in the future will also need to approach their projects with a design mindset, comprehensively looking at the way information is delivered, science is leveraged, and people connect. The average person will have new tools and technologies at their disposal that will allow them to physically and intellectually mold the world around them in ways that would have been impractical before. They will be expected to not simply accept things as they are, but too often independently create new systems, interfaces, environments and spaces to better serve humankind.

At the same time, working learners will need to embrace transdisciplinary approaches to problem solving, not simply relying on one discipline to address challenges or seize opportunities. Instead, they will have to look for areas where multiple disciplines intersect in sometimes unexpected ways to optimize outcomes. Because of this, working learners will not only need to be knowledgeable in specialized areas of expertise, but also have a broad understanding of the content and capabilities present in other areas.

Just as machines are being built with more artificial intelligence in an effort to teach them to think like humans, it will also be important for humans to, in a way, think like machines. As machines become more integrated into daily life and harder to extricate from the way we live, working learners must develop the ability to understand how they operate, and how that operation applies to everything we do. Computational thinking, which is an understanding of the connections across digital systems, is no longer simply the purview of scientists, theorists, and ethicists, but will be necessary for everyone.

Every person and every institution will be affected by the proliferation of these skills in the workplace—from corporations who will incorporate them into their business operations to academic institutions who will have to find new ways to prepare students to gain and use them. It is clear that working learners of all ages will have to engage in a process of lifelong learning—often self-directed—using the panoply of resources that will exist. Success in the coming working and learning landscape will require that working learners have the foresight and flexibility to constantly update and refine these skills.
Explosive growth is seen in models that are working learner-led and allow working learners to effectively combine learning and working. Duolingo is a company that offers language learning where students learn a foreign language while simultaneously translating text for pay. The space of aligning working and learning is so big that there isn’t a winner-takes-all market. Instead we are seeing work-and-learn options develop that bring working and learning together in different ways whether it’s through HowStuffWorks or projects offered by Wolfram. These new “work-and-learn options” offer working learners the opportunity to own their own working and learning journey by creating real-time pathways for themselves.

Similarly, working learners are being empowered by new-age unions such as the Freelancer’s Union which supports our country’s entrepreneurs and independent workers totaling around 53 million. Companies like Task Rabbit, where households and trusted individuals are connected for short-term jobs, and Upwork, where businesses and independent workers directly collaborate on work-for-hire, are providing working learners the opportunity to align their learning paths with their work efforts. These digital marketplaces for freelancers to open the doors for working learners to learn while generating income and gain the flexibility to work and learn whenever, wherever and at any age.

This graphic represents the spectrum of work-and-learn opportunities dropped onto a continuum anchored by the level of coordination required for the work-and-learn option and “who” offers the work-and-learn option. Work-and-learn options range from being highly structured (High Touch) such as registered apprenticeships to loosely defined (Low Touch) such as instituting working learner-friendly practices and policies like deferring tuition to align with employer reimbursement cycles or employers hosting study zones at the workplace.

**www.marcandangel.com/2010/11/15/12-dozen-places-to-self-educate-yourself-online/**

MIT & Tufts OpenCourseWare • HowStuffWorks Science • Harvard Medical School & Open Yale Courses Wolfram Demonstrations Project • TheStreet University • AMSER Mathematics • Writing Labs at Purdue iTunes U • Connexions/OpenStax CNX
QUESTIONS TO CONSIDER
WHEN DESIGNING A WORK-AND-LEARN PROGRAM

The National Network has compiled this guidebook to inspire businesses and industries to create new work-and-learn programs within their communities. Provided below is a list of questions to consider in the design and development of a work-and-learn program.

PROGRAM GOALS AND OBJECTIVES: What are the goals and objectives of the work-and-learn model? How will the program benefit the business?

WORKFORCE NEEDS AND MODEL SELECTION: What are your current and future workforce needs, and how might a work-and-learn model support these needs? Which model type(s) best align with your workforce needs?

BUDGET: What is the available budget for the work-and-learn model?

RESOURCES: What other internal and external resources are available to the organization to develop and run the work-and-learn model (teachers, equipment, corporate partnerships, etc.)?

ALIGNMENT WITH COMPANY CULTURE: How will the design of the work-and-learn model align with company culture?

EMPLOYEE INVOLVEMENT: Will employees value the program enough to serve as mentors/managers for work-and-learn participants? Do you have plans to identify mentor and manager resources for the program?

PARTNERSHIPS: What groups might the business partner with or leverage to make the work-and-learn model a success? Partnerships to consider include educational institutions, for-profit organizations, parents/guardians, consultants, workforce development groups, and local businesses and industries.*

RECRUITMENT: How will you develop an effective recruiting process to attract students and workers to the work-and-learn program partnerships in the recruitment of talented students and workers for the program?

VALUE TO PROGRAM PARTICIPANTS: Does the work-and-learn program provide students/workers with something of value (academic credits, employer recognition, credentials, etc.)?

MANAGEMENT SUPPORT: Is the work-and-learn program supported by senior management?

RETURN ON INVESTMENT AND COST-BENEFIT ANALYSIS: How will you quantify the success and return on the model?**

PROGRAM MANAGEMENT: Who will manage the work-and-learn program and track its performance against established model goals and objectives?

SKILLS AND COMPETENCY MAPPING: Have you developed a map of the skills and competencies needed for your company’s jobs and a plan to teach these skills to work-and-learn participants?

PROGRAM PILOT: Are you prepared to pilot your program with a small group of program participants?

EVALUATION OF THE PILOT AND LARGER PROGRAM ROLLOUT: Do you have a plan to review model goals and objectives against the pilot program results? Do you have a plan to adjust program elements as needed before adding additional resources and individuals to the program?

COMING JOIN US
AND BECOME
AN IMPORTANT
ACTOR IN
THE NEW
LEARNING
ECONOMY.

* One resource that lists many organizations working in career education and workforce development is A Guide to Understanding Career and Technical Education by the Career and Technical Education Foundation.

** A number of third-party resources have been created to support the development of return-on-investment calculations for work-and-learn models. These include tools from The Manufacturing Institute and Grads of Life.

Looking into the future....

These reports typically cover working or learning but not how they coincide and interact. Research on working and learning is a new and emerging field and only recently have attempts been made to pull the two fields together. In general, any experience where the work and learning are aligned and complementary, it results in higher returns. The primary policy question as suggested by Kramer and Usher in their examination still lingers:

“An important policy question that continues to linger: given the demonstrated benefits of institutionally-organized work experiences, why are they not better-distributed across the university? Granted, co-op might not work easily in all fields of study, but if various forms of research assistantship and field work provide essentially the same benefits, why wouldn’t an institution work hard to find ways to expand these types of opportunities?”

An important policy question that needs to be seriously debated between educators, employers, and policy makers in order to advance opportunities for working learners is this:

Given the demonstrated benefits of all types of work-and-learn options offered to a diverse group of working learners, why are those opportunities not better distributed across all income-levels?

We need to get ahead of the economics driving learning and societal changes to ensure equity gaps don’t continue to grow.

Let’s expand work-and-learn options for ALL working learners by harmoniously integrating working, learning and living in new ways to increase overall life satisfaction.
ACT Foundation is a national nonprofit dedicated to helping young people achieve education and workplace success. Working with today’s business, education, and philanthropy leaders, as well as tomorrow’s visionaries, ACT Foundation invests in research, programs, and partner networks to increase educational and economic opportunity, particularly for low income, high-school, college, and young adult students working for while learning. [2012-2016]

The ACT Center for Equity in Learning combines and leverages the talent and resources of the ACT Office for the Advancement of Underserved Learners and the ACT Foundation to create a single unit with one aligned purpose and goal: helping underserved learners and working learners (individuals who are employed while also learning new skills in pursuit of greater success) achieve education and career success. [2016 onward]

### About the authors...

**Parminder K. Jassal** was named Founding Executive Director of ACT Foundation in 2012. She oversees the organization’s unique role as an operating foundation that funds strategic investments and serves as an incubation partner to support those individuals who are working for pay and learning toward a credential in a related field of study. Dr. Jassal previously served as a program officer supporting postsecondary success for low-income young adults at the Bill & Melinda Gates Foundation.

Dr. Jassal earned a bachelor’s degree in market research from the University of Northern Iowa, a master’s degree in education and market research from the University of Alaska Anchorage, and a doctorate in higher education leadership from the University of Louisville.

**Hope Clark, PhD**, is a thought leader, pracademic and expert in workforce research. Her area of expertise is translating complex theories and research into practical terms to provide the greatest impact and opportunity for positive change. She is currently a Principal Research Psychologist at ACT, Inc., an independent, nonprofit organization that provides assessment, research, analytics, and program management services in the broad areas of education and workforce development. Hope previously served as the Director of Research and Analysis for the Indiana Department of Workforce Development under the leadership of Governor Mitch Daniels. In this position, she directed Indiana’s federal-state cooperative employment and occupation statistical programs, including the development of the Indiana Workforce Intelligence System providing linkages between K-12, Postsecondary and Workforce data to better understand the unique dynamics between working and learning.

Hope earned a master’s degree in Rehabilitation Counseling, and a master’s degree and doctorate in Industrial and Organizational Psychology, all from Northern Illinois University.

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