A Simplilearn Report 2020

IT Skills Training Trends

2020 and 2021

INTRODUCTION

2020 has been a tumultuous year. Even before the onset of the global COVID-19 pandemic, the world was changing rapidly around us, from digitization to rapid enterprise transformation to innovation in almost every sphere of technology. The global pandemic accelerated these changes by forcing businesses in every industry to change the way they work, what goods and services they offer, and how they offer them.

Economic growth in 2019 slowed from its pace in the preceding years, but the effect of the pandemic and the lockdowns starting in early 2020 turned slow growth into a sharp contraction. A number of workers lost their jobs, and the ones who didn't began to worry whether their jobs were secure. Still, in several industries, the demand for workers increased in response to the changes in business models.

This report puts the focus on how people have to adapt to this ecosystem today. Changing business focus and resulting changes to job requirements are prompting workers to pick up new skills to ensure that they prepare not only for today but for an ever-changing future.

As we approached 2021, Simplilearn decided to take the pulse of our large global ecosystem to find out how 2020 has affected work environments and what its members are doing to prepare for the various eventualities that they foresee in 2021. We surveyed our learners and our enterprise customers regarding how they felt about 2020, what they feel about 2021, and what they are going to do to make 2021 turn out better.

We asked six key questions:

✓ How has the past year affected your career plans?

✓ What do you expect in 2021 to bring for your career?

✓ What are you doing to prepare your career for what lies ahead in 2021?

✓ Which do you think is the most effective way to start learning a skill?

✓ What do you think adds the most value to an online upskilling program?

✓ What benefits do you expect upskilling to bring to your career in 2021?

19.4% of respondents were freshers. 51.3% mid-level, and 29.2% senior-level.

Respondents came from various industries:

Information Technology	50%
Manufacturing	7%
Consulting	6%
Pharma & Healthcare	5%
Finance	5%
Others	28%

The respondents came from companies of all sizes:

1- 50 employees	17%
51 to 500	17%
501 - 2,000	16%
2,001 - 10,000	19%
More than 10,000 employees	31%

Overall, almost half of respondents reported that 2020 was a down year for their careers. Looking ahead, two-thirds of respondents said they are preparing for career advancement in 2021 by gaining new job skills.

For many, 2020 felt like a year of career setbacks and stagnation.

What we lost in 2020

- 14% lost their jobs

- 32% feel stuck in their career because of the pandemic

- The feeling of stagnation especially affects mid-career professionals (41% of mid-career respondents felt this way).

- In large organizations, 25% of professionals feel stuck

- Professionals in Consulting, Finance, and Healthcare/Pharma were more likely than others to feel stuck

- Professionals in Manufacturing and Finance were more likely to report job losses

According to the **U.S. Department of Labor**, the largest declines in total employment, from February through September 2020 were found in:
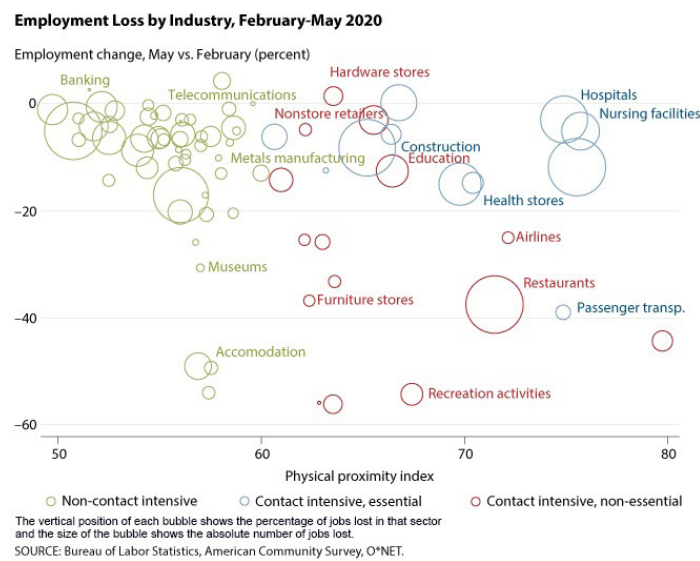
- Restaurants and Bars

- Professional and Business Services

- Health Care

- Arts, Entertainment and Recreation

- Hotels and Accommodations

- Retail Trade

These jobs require close contact, are non-essential, or both.

However, **different segments of these industries** have felt different impacts. The fastest-growing industries in 2020 include tele-health and home health in health care and IT services in professional and business services.

The figure below shows how job losses in the pandemic correlated to how much personal contact those jobs required. Jobs that aren't contact-intensive, especially ones that can be done remotely, suffered fewer job losses due to COVID-19. Among jobs that require close contact with customers or clients, only the most essential have been protected from job losses.

Industries that used to rely on close contact have looked to digital technologies to restructure their processes for remote operations. For example, health care has accelerated its adoption of tele-health to allow providers to see, diagnose, and treat many patients remotely.

Employment Loss by Industry, February-May 2020

Employment change, May vs. February (percent)

Physical proximity index

○ Non-contact intensive   ○ Contact intensive, essential   ○ Contact intensive, non-essential

The vertical position of each bubble shows the percentage of jobs lost in that sector and the size of the bubble shows the absolute number of jobs lost.
SOURCE: Bureau of Labor Statistics, American Community Survey, O*NET.

Job stagnation is a result of the changes in job demand. When unemployment rises, especially as sharply as it has in the pandemic, workers are less likely to look for better job opportunities and more likely to stick with their current jobs - but that can contribute to the feeling of career stagnation. **Many American workers say** they are happier with their current jobs - but a large number also say their jobs have gotten harder since the pandemic and even more say they would switch jobs for a salary raise.

✔ 54% of American workers confirm that they are very satisfied with their current job.

✔ 38% of employees agree that they are happier with their jobs now compared to prior to the COVID-19 outbreak.

✔ 34% of employees say their job has gotten somewhat harder after the pandemic.

✔ 43% of people would leave their current job for a 10% salary increase.

Upskilling is a main driver of professionals' hopeful outlook for 2021.

Professionals are taking a proactive approach to career success in 2021

- ✅ 35% have taken the pandemic as an opportunity to learn new skills

- ✅ This feeling is significantly higher in small and medium enterprises - 50% of them feel that the pandemic has been an opportunity to gain new skills

- ✅ 68% of professionals see learning as the key to landing better opportunities and plan to start learning programs in 2021

- ✅ 4% of respondents feel keeping their jobs depends on learning new skills

- ✅ 66% of professionals are either enrolled in training programs or plan to start in 2021

A number of companies in various industries innovated their way to new business models to adapt to the pandemic.

- ✅ Fintech companies like ZestMoney in India and Dave in the U.S. used AI technology to make automated credit decisions for consumers, detect fraud, and make contactless payments easier.

- ✅ In the U.S., retailers from Walmart to Dominos Pizza adopted "contactless" curbside pickup, where employees deliver online purchases to the customer's car outside the store. This service depends on reliable digital systems to schedule order fulfillment and give customers reliable pickup times.

- ✅ Health tech companies and startups created devices and systems like the PulseNMore handheld ultrasound scanner to enable remote diagnostics and contact-free medical consultations.

Innovation has spurred continued demand for upskilling and reskilling.

"Despite the current situation, our commitment to continue human capital development, mentor the best talent, and groom leaders from within remains a strategic priority. It's critically important to us to continue to enable and empower our staff to carry on their professional development without disruption."

- Dana Buheji, Chief Human Resources Officer, National Bank of Bahrain

The COVID-19 pandemic has driven a movement to **frugal innovation**, in which existing technologies, products, and resources are repurposed to meet new priorities. Some key examples include:

Hospitals that found themselves short of ventilators early in the pandemic were able to repurpose CPAP machines used to treat sleep apnea and use them instead to treat early-stage COVID patients, thus allowing the ventilators to be reserved for the critically ill.

A number of **textile companies** in a local area pooled their manufacturing capabilities to shift production to surgical gowns and masks for local hospitals.

Restaurants that were forced to close indoor dining rooms shifted to delivery models. Some of these went beyond meal delivery to include home delivery of the ingredients and supplies the restaurant normally uses. This preserves the restaurant's business, keeps staff employed, and serves the local community.

In many industries, innovation focused more on rapid reconfiguration and deployment.

Lockdowns forced many companies to shift to a **work-from-home model** in a matter of days. The rapid redeployment of the workforce had to be followed by massive expansion of the network and security infrastructure to support these off-campus workers. In turn, this has accelerated the adoption of newer technologies such as remote team collaboration and zero-trust security.

The **shift to ecommerce** has required ecommerce companies to ramp up capacity massively. At the same time, companies that were not prepared for ecommerce on a large scale have had to adopt it and adapt to it in a very short time.

Manufacturers have had to **reconfigure their factories for COVID-safe operations.** As part of the effort, they have sought to streamline and automate their operations to reduce the number of personnel who have to work together at close quarters.

Technology professionals will be in demand in 2021, as much because of the pandemic as in spite of it.

Upskilling is the engine to propel your career in 2021

- 54% of professionals expect upskilling to provide better opportunities in 2021 or lead to pay raises and promotions in their current jobs

- 20% expect upskilling to future-proof their careers

- 26% expect upskilling to unlock a new career path that lets them follow their passion

Top careers for 2021

1. Data Scientist

2. Internet of Things (IoT) Solutions Architect

3. Big Data Engineer

4. Software Architect

5. Blockchain Engineer

6. DevOps Engineer

7. Cloud Architect

8. Full Stack Developer

9. Artificial Intelligence (AI) Engineer

10. Product Manager

Top technology trends in 2021:

1. AI and Machine Learning (ML)

2 Robotic Process Automation (RPA)

3. Edge Computing

4. Quantum Computing

5. Virtual Reality (VR) and Augmented Reality (AR)

6. Blockchain

7. IoT

8. 5G

9. Cybersecurity

"The idea that a college degree singularly prepares students for decades of work has long been outdated; instead, learning is a lifelong process that intersects with the workforce continually. In the future, degrees will continue to hold value, not because of the degree credential, but because a degree is composed of many skills and competencies that are valued by employers. Covid-19 has accelerated dramatically the need for mid-career reskilling and upskilling. It has created a sudden demand for education at unprecedented scale."

Scott Pulsipher,
President of Western Governors University

In 2020, the effects of the COVID-19 pandemic, especially the work-from-home transformation, have driven a clear trend to online learning. For individuals, work-from-home means more time available for online learning, and Simplilearn's learner data bears this out: usage on our platform has doubled compared to pre-pandemic usage.

Another factor affecting individual learners is career uncertainty and disruption. A lot of people have lost their jobs during this pandemic. But many companies in the technology sector have thrived in the same circumstances. It's become clear to many professionals that digital skills are a key to career stability and growth, another factor driving Simplilearn's growth in enrollments and usage.

Organizations are also realizing that training is a form of engagement with employees that keeps them oriented to their jobs as it improves their capabilities to perform those jobs. Online learning is a way you can give your employees the opportunity to learn something while staying in constant touch with them. Organizations also realize that this may be a one-time opportunity to leverage the extra time their employees have while working from home.

In the world of higher education, universities around the world have shut down in-person instruction and have shifted to online learning. However, students are not limiting themselves to the academic courses offered by their universities; they are also seeking skills training to prepare for future employment. Indeed, a number of universities have partnered with Simplilearn so they can offer their students the skills they need and want.

In keeping with 2020's trend to doing nearly everything online, most professionals look to online learning for upskilling.

Online upskilling is a wise career development step

- 71% believe that the best way to start learning a skill today is to either via paid online programs or via self-learning with free online courses

- 73% percent of professionals are either exploring what they want to study in 2021 or have a definite plan to enroll in an online certification program

Online learning is popular for many reasons:

- Online learners are able to set their own schedule

- They can study anywhere in the world

- Online education accommodates diverse learning preferences

- Individuals can learn while they earn

- Online education helps maintain a professional/personal life balance
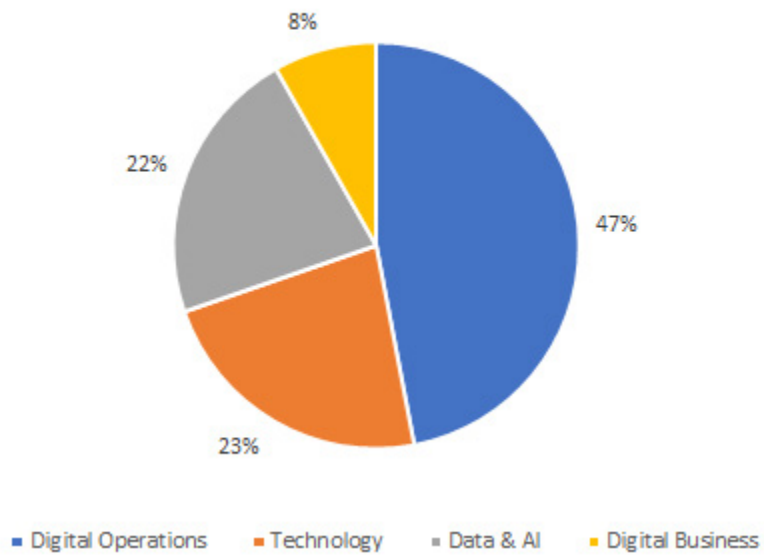
- Online education is more cost-effective

What are they learning?

By Category and course name

Digital Operations courses are the most popular mega-category, followed by Technology and Data & AI.

## Course Enrollments by Mega-Category

- Digital Operations
- Technology
- Data & AI
- Digital Business
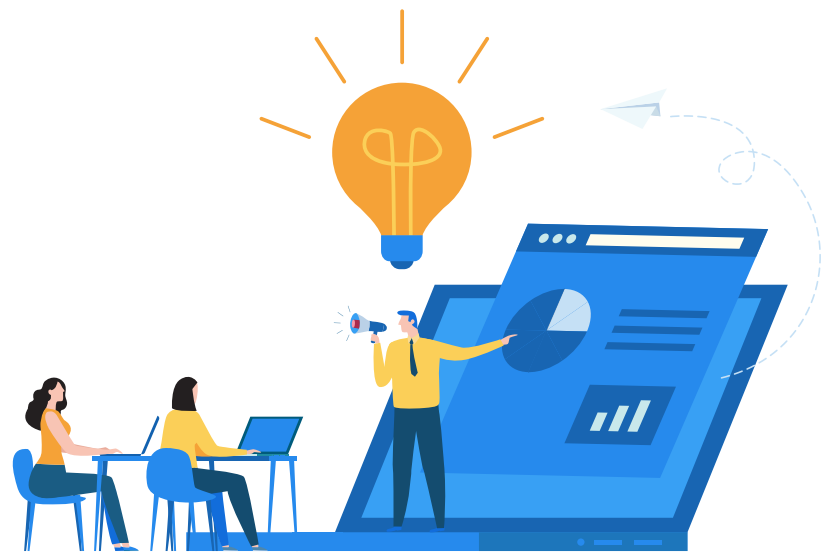
Top Twenty individual courses in 2020

| Category	Course Name
Digital Operations	PMP
Digital Operations	Certified ScrumMaster (CSM)
Digital Operations	ITIL 4 Foundation
Data & AI	Data Scientist
Digital Business	Digital Marketing Specialist
Data & AI	Data Analyst
Technology	Cloud Architect
Digital Operations	TOGAF® 9.2 (Combined Level 1 & 2)
Digital Operations	PRINCE2 Foundation and Practitioner
Digital Operations	PMP Plus
Digital Operations	Certified Scrum Product Owner (CSPO)
Data & AI	Artificial Intelligence Engineer
Digital Operations	Lean Six Sigma Green Belt
Technology	AWS Solutions Architect
Digital Business	Business Analyst
Technology	CEH (v11)- Certified Ethical Hacker
Digital Business	Certified Business Analysis Professional (CBAP)
Technology	CISSP
Technology	Full Stack Java Developer
Technology	Post Graduate Program in Cloud Computing

Who is learning what
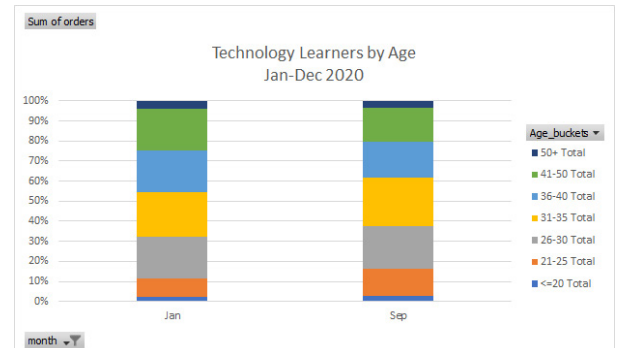
By career stage
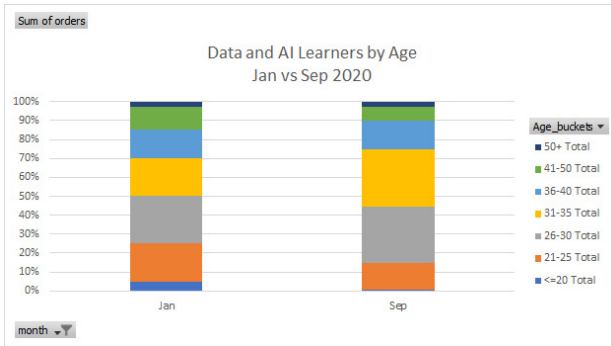
Post-COVID, Data Science and AI/ML courses became more popular with mid-career (31-40 year old) learners.
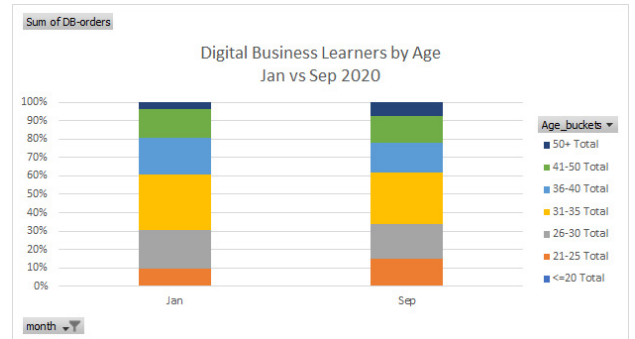
Post-COVID, Digital Business courses became more popular with both young (under 25) and senior-level (over 50) learners.
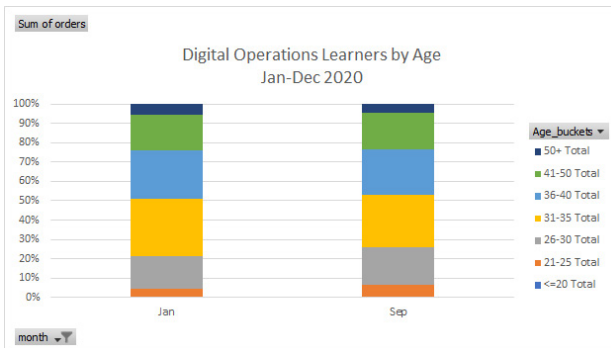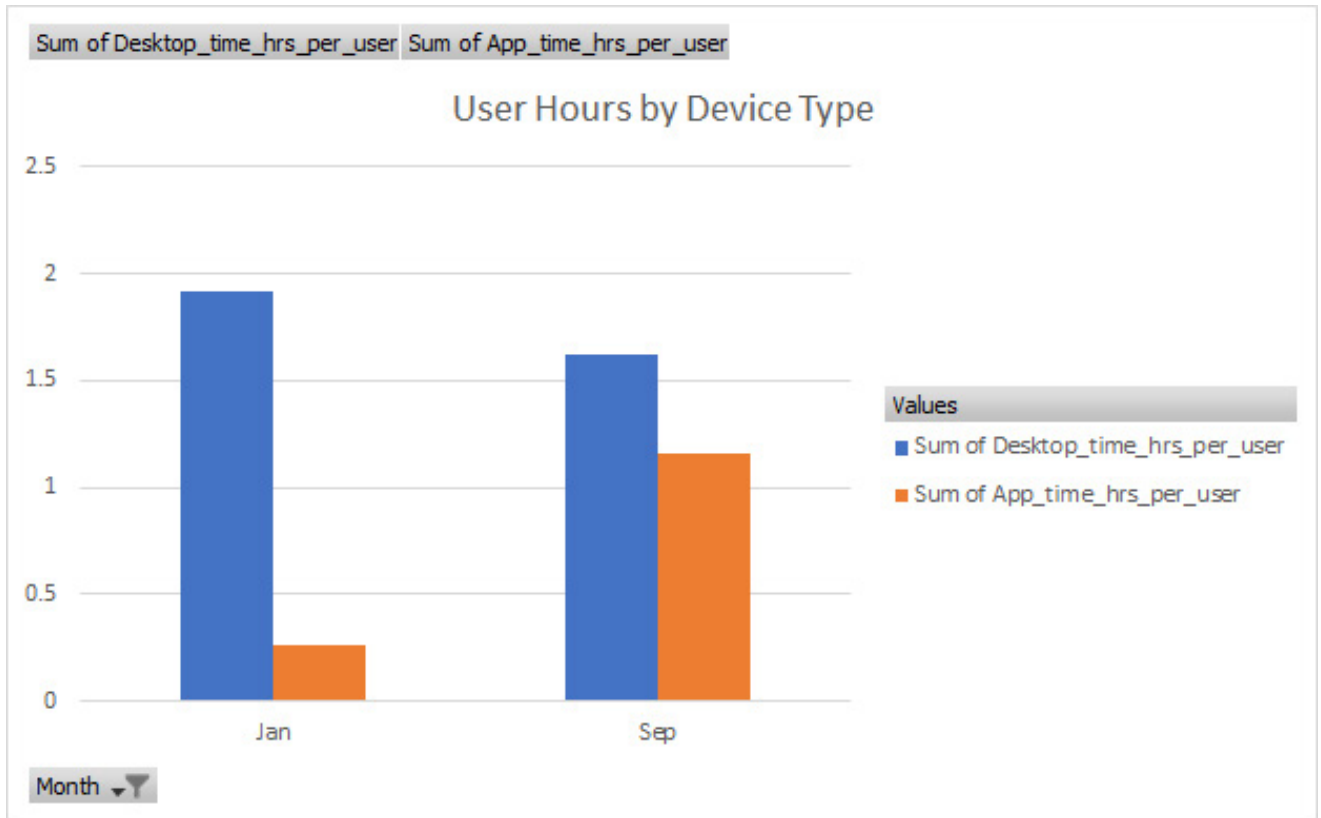

Post-COVID, Digital Operations courses became somewhat more popular with early-career (30 year old and younger) learners.

Post-COVID, Technology courses became more popular with early-career (30 year old and younger) learners.

How are they learning

By device type

Sum of Desktop_time_hrs_per_user Sum of App_time_hrs_per_user

Post-COVID, users are spending slightly less time on the desktop but substantially more time on the mobile app.

Professionals looking to upskill demand Bootcamp learning: applied learning aligned with Industry requirements.

Bootcamps entail learning by doing, using new skills in projects that mimic real industry assignments

Programs that focused on applied learning featuring projects and practice labs coupled with industry partnerships and accreditations were preferred by 75% of professionals

"For many leaders, improving the competencies of the talent within their functions is a top priority. However, this is often approached in a shortsighted way, with leaders assuming that quick fixes like covering a topic in a team meeting or sending someone to a day of training will magically transform their performance. Watching instructional golf videos can provide guidance and tips, but it shouldn't be the only thing you do to learn the game. Similarly, real and lasting competency development requires an ongoing process to learn and apply concepts to real work situations and reinforce new behaviors over time."

Jeff Lash, Forrester

"When courses are precisely defined and use digital tools such as software-based training as part of the curriculum, upskilling can be remarkably productive.

For example, in university study, the minimum time needed to gain a solid foundation in Java programming is about 800 hours, spread over two years. With an online course, a worker can progress at his or her own speed, accelerating the learning curve. Under those circumstances, it is possible to learn to code well enough to get a job in nine to 15 weeks."

Laurent Probst & Christian Scharff, PwC Luxembourg

This type of learning is geared toward raising performance. This approach involves building people's strategic acumen so they can come up with new ways to solve real-world business problems, using the new tools as part of the solution. A performance-raising module on blockchain might involve prototyping a blockchain system, perhaps one for a bank or medical practice that allows data sharing while maintaining privacy. In the past, only a few people could design such a system, and they might need supercomputers to do it. Now, the work can be done by a mid-level employee with a laptop and a smartphone.

Darrren Lee, Mike Pino, and Ana Johnston, PwC

The Simplilearn Perspective

Simplilearn is the world's #1 online Bootcamp for digital economy skills training, focused on helping people acquire the skills they need to thrive in the digital economy. Simplilearn provides outcome-based online training across technologies and applications in Data Science, AI and Machine Learning, Cloud Computing, Cyber Security, Digital Marketing, DevOps, Project Management, and other critical digital disciplines.

Simplilearn's bootcamp-style learning delivery model provides learners with an effective combination of self-paced, online classes; expert, instructor-led, live virtual classrooms; and interactive labs. This high-engagement learning model follows a learn-by-doing approach. Learners are given the opportunity to work on many hands-on labs and projects throughout the process. Their learning success is documented with skills certifications backed by industry partners..

Simplilearn's most comprehensive programs are its Master's programs and its Post Graduate Programs. Master's programs consist of a complete learning part with a structured series of courses to take a learner from a basic understanding of a skill to professional-level proficiency in it. Post Graduate Programs elevate the Master's programs through partnerships with leading universities, including Purdue University, Caltech CTME, MIT Schwarzman College of Computing, and UMass Amherst. These PGP programs incorporate master classes from the university faculty and offer program graduates ongoing affiliation with the university community.

Online learning is increasingly in demand from both students and professionals, and employers and universities fully support this trend. Digital economy skills are vital to individuals as the foundation of a healthy career, and they are essential to employers as a critical resource for digital transformation and long-run competitiveness.   Ultimately, upskilling and reskilling are the keys to a better career in 2021 and in years to come.

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