

BEYOND BOOTCAMP

Policy Considerations for Accelerated Learning

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FOREWORD

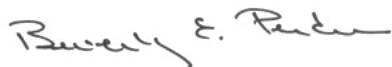
Nearly every decision I made as Governor of North Carolina was wrapped around the importance of education. From early learning to incumbent worker training, nothing was more important than investing in people and their ideas.

Now more than ever, governors are working to transform their education systems to meet the needs of an ever-changing workforce. In North Carolina alone, there are over 18,000 open computing jobs that are unfilled. In the U.S., there are currently over 5 million (yes, million) job openings. At the same time, our nation is investing over a trillion dollars in postsecondary and workforce training each year.

To help close our national skills gap, state leaders must harness the potential of new education models. Success will require more than simply tinkering with existing programs, but also nurturing new ideas and educational models that don't even exist yet. This requires us to take a hard look at where we are today, and articulate what "should be" and what "could be" done to make the best investment possible for people and communities.

Although nascent, learning accelerators represent a powerful approach to solving our nation's workforce skills gap. They are an example of American ingenuity applied to one of our most pressing modern day problems. In just a few years of existence, they are demonstrating how new ideas can inform old challenges in workforce training. They are showing us new ways to match skills-training with market demand—and not just in technology and design, but across industries. They are, in short, innovating with a focus on the needs of people and communities.

This primer is a welcomed guide that can help policymakers better understand the learning accelerator sector. It is important that the ideas and concepts get more attention, and that policymakers take a thoughtful approach to considering the potential and the limitations of this new model. With the support of smart policy and prudent regulation, learning accelerators represent the best of people-centered innovation that will transition our workforce into the next decade.



Governor Beverly E. Perdue
Governor of North Carolina, 2009–2013
March 31, 2015

CONTENTS

02	FOREWORD BY GOVERNOR BEVERLY E. PERDUE
04	EXECUTIVE SUMMARY
05	ABOUT THE AUTHORS
06	THE SKILLS GAP
06	THE SECTOR'S POTENT GROWTH
07	A NATIONAL ECONOMIC NARRATIVE
08	THE LANDSCAPE
09	REGULATORY ENVIRONMENT
11	THE ROLE OF EMPLOYERS
13	TOP 10 CONSIDERATIONS FOR POLICYMAKERS
15	APPENDIX A: SELECTED LEARNING ACCELERATORS
16	ENDNOTES

EXECUTIVE SUMMARY

This document provides a primer on learning accelerators, a new set of educational organizations that provide short-term, immersive training aligned to the rising technology needs of businesses. It describes the growth of this emerging sector in the context of the changing economy. It discusses how state regulators are working to strike a balance between this fast-growing sector and their consumer protection responsibilities; and it identifies “Top 10” considerations for policymakers that will affect the success and impact of learning accelerators on state and local economies.

Let’s first define them. Learning accelerators are organizations that offer private postsecondary, non-degree granting courses and full-time immersive programs in technology, business, and design. They provide their students with an intense period of training and a link to potential employers, both of which are designed to help them land good jobs. They are sometimes referred to as “accelerated learning programs,” but to avoid confusion with other initiatives that also use that term, this paper uses “learning accelerators.”¹

What they are not is just as important. They are not your traditional private postsecondary vocational schools. Their programming focuses on the technology and entrepreneurial skills that are required for employment in fast-growing and rapidly changing jobs (such as web development, user experience design, digital marketing, and data science). As a result, their operational structure and course offerings are typically more dynamic than those at traditional institutions, reflecting the evolving needs of local businesses. The students are also quite motivated. The average student in one of the full-time programs is a U.S. citizen, 29 years old, male and already holds a bachelor’s degree.²

This new model has its challenges. It requires state and municipal regulators to pause and reconsider the balance between their responsibility to protect consumers and the rapidly changing needs of students, employers, and workforce training institutions. This is a good thing. The rise of learning accelerators is giving policy makers an opportunity to reconsider the marriage of innovation and regulation and how, over the next few years, the two can work to support this new sector.

But first a disclaimer: General Assembly (GA) commissioned this brief to provide policymakers and the media with a better understanding of learning accelerators and a high-level description of some recent developments in state regulation of the sector. It is not a comprehensive report or analysis of the sector or the policy environment and we encourage other analysts to engage in such research. General Assembly did not retain editorial control over the content, and the views contained in this primer are those of the authors. They do not represent the views of the authors’ employers.

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THE SKILLS GAP

Rarely does a month go by without new evidence of the so-called “skills gap” that exists between what schools and colleges teach and what employers need. On national surveys, employers routinely report difficulty filling important positions and dissatisfaction with the skill levels of current graduates. A January 2015 survey of employers and college students, for example, found that while majorities of employers felt that students were not well prepared on skills and knowledge that are critical to workplace success, most students felt that they were quite well prepared in those areas.³ When it came to applying knowledge and skills to the real world, just over 20 percent of employers saw graduates as well prepared; nearly 60 percent of college students said the same.

No surprise, then, that more than half of employers report having difficulty finding qualified graduates to fill positions—and this at a time when many Americans remain out of work or have dropped out of the labor force entirely.⁴ Meanwhile, estimates suggest that nearly 45 percent of recent college graduates were underemployed in 2012—working jobs that do not require a college degree. And within that group, the proportion of graduates working low-wage jobs increased throughout the first decade of the 2000s.⁵

While the skills gap has raised challenging questions for policymakers and existing educational institutions, it has also created an opportunity for entrepreneurs. In particular, “learning accelerators” have captured the attention of policymakers and employers alike by delivering immersive, in-person courses that train students in high-demand skills such as web development, mobile technology, data science and design. The early results suggest that these organizations have exceptional job placement outcomes, and the number of accelerators has proliferated over time.

These new providers present both an opportunity and a challenge for policymakers. On the one hand, they offer a way to fill skills gaps and promote employment and economic growth. On the other, they are private, for-profit companies that charge tuition for educational services, and, under most state statutes, such organizations must be approved and licensed by the state. These licensure and authorization processes are designed to protect consumers. But they are often based on a traditional model of postsecondary education and job training and may be ill-suited to regulate providers that adapt quickly to changing employer demands. The question confronting policymakers today is how they can ensure that citizens and employers continue to benefit from this sector and maintain the state’s commitment to consumer protection. This brief is designed to inform those discussions.

THE SECTOR’S POTENT GROWTH

General Assembly’s story illustrates the sector’s potent growth. In the first decade of the 2000s, New York City’s economy was diversifying, balancing its historical overreliance on finance with a growing digital ecosystem of tech startups across multiple industries. But it lacked shared workspaces where entrepreneurs could come together, share ideas, and create start-up companies. For example, while the city experienced a 60 percent increase in information technology jobs from 2003 to 2012, there were zero tech incubators until 2008.⁶

The city provided General Assembly a small grant to open a community space for entrepreneurs in 2011, and General Assembly offered a few educational classes as a part of that grant. These classes, however, soon became the main draw. “Those classes made us realize that we should expand our education offerings,” said Jake Schwartz, CEO and co-founder of General Assembly. “We wanted to offer immersive, transformative skills training. Along with a few other early programs, GA helped create the graduates and teachers who then went off to start similar organizations—and the sector soon took off.” Two years later, in October 2013, General Assembly transformed into an organization exclusively focused on education, allocating all of its resources to its training programs in tech, business, and design. “We took inspiration from the vocational model but gave it a different

brand aimed at a new audience,” says Schwartz, “GA is empowering people with more than just coding skills. We are providing a broad range of critical 21st century skills training, and fostering the creation of companies and communities.”⁸

Fast-forward to today, General Assembly now offers classes around the world, including San Francisco, London, Chicago, Hong Kong, Sydney, Washington, D.C., and more. It has more than 10,000 alumni and plans to expand to another seven cities in the next two years and top 40,000 alumni by the end of 2015.⁹

A NATIONAL ECONOMIC NARRATIVE

General Assembly’s story is a part of a national economic transformation. Information technology is one of the economy’s largest and most dynamic sources of employment growth.¹⁰ This is particularly true in states with booming tech corridors like “Silicon Alley” in New York, “Optics Valley” in Arizona, “Telecom Corridor” in Dallas, Texas, “Silicon Forest” in Portland, Oregon and more.¹¹ “In a lot of cities, the tech sector is exploding, and it’s hard for companies to hire as fast as they need,” says Jonathan Bowles, executive director of the Center for an Urban Future.¹²

It is important to note, however, that this is about more than just information technology. Tech is an enabling force across industries like fashion, healthcare, financial services, and more.¹³ Jon Stowe, the President of Dev Bootcamp, argues that “coding is the new literacy. Other jobs in the new economy (product management, development operations, user experience, quality assurance testing, deep technical support, and even project management) are all better served by professionals with training in software development.”¹⁴ Indeed, as social entrepreneur Andrew Rasiej elegantly puts it: rather than thinking about coding and information technology as a slice of the economic pie, think of it as “the pan.”¹⁵

Tech’s influence on the social zeitgeist supports “the pan” point of view. Harvard Business Review has bestowed the title of “Sexiest Job Alive” onto data scientists.¹⁶ Apple’s iWatch graces the cover of Vogue. Regulators at the Federal Communications Commission (FCC) and the attendees of the Consumer Electronics Show (CES) are both buzzing about the transformative implications of the Internet of Things.¹⁷ Further economic change and demand for new skills lay ahead.

Given all of this momentum, the boom in learning accelerators should not come as a surprise. According to Course Report, a start-up that reviews accelerated learning programs, in 2013 there were 33 organizations offering full-time courses. That jumped to 43 schools in 2014 with 5,987 graduates, a 175 percent increase over the prior year.¹⁸ And that number is only for full-time courses at schools focused on mobile and web development. Add in part-time courses and programs focused on design, marketing, and other subjects, and the growth curve gets even steeper. “Since we put that report together, I can think of 40 programs that have launched,” says Adam Lovallo, the founder of Course Report. “I expect that the growth is going to be really, really strong in the next report. I don’t know if it’s a 180 or 200 percent number, but it wouldn’t shock me if that turns out to be the case.”¹⁹

But will program quality accompany the growth? Getting into the market is easy. Sustaining growth, course quality and student and employer satisfaction is more challenging. “We are already seeing many of the small programs running into trouble,” observes Jake Schwartz. “It was easier for the early market entrants, but those without the scale, expertise and established best practices find it challenging to produce reliable results again and again. The transition from serving early-adopter students to mainstream students who need more structure is a difficult thing.”

THE LANDSCAPE

In a sector that is growing as quickly as this one, it is difficult to get an accurate snapshot of the universe of providers at any one time. We chose to focus here on seven of the oldest and largest of the learning accelerators (see Appendix A), though working lists and reviews of existing coding schools can be found on websites like Course Report and Techendo.²⁰

Most of these programs focus on web development, specifically teaching students to code in common programming languages like Ruby on Rails, JavaScript, and HTML5. Others—like Flatiron School, General Assembly, and Galvanize’s gSchool—also offer courses or programs on data science. General Assembly offers the widest variety of courses; in addition to web development and data science, GA offers courses on business fundamentals, user experience design, product management and digital marketing, among others. The list of courses expands regularly to keep up with employer demands.

Among this group of seven, course lengths run from as short as two weekends (Flatiron’s part-time data science course) to 24 weeks (gSchool’s Full-Stack Web Development immersive). They are usually shorter than a full college semester (10–12 weeks is typical), but students cram much more study and coding time into those weeks than is the norm in a college course. Most of the full-time courses we reviewed require a minimum of 40 hours per week, and many require between 60 and 70 hours per week. The immersive courses tend to be full-time endeavors, and the demanding nature of the programs likely has something to do with their success.

These offerings are not cheap by conventional higher education standards, with tuition for immersive courses ranging from just below \$10,000 for some at General Assembly to \$21,000 for gSchool’s 24-week Full-Stack Web Development program. For comparison purposes, the high end is more expensive than the average sticker price of attendance (including room at board) at public four-year colleges.²¹ Some providers, like App Academy, have payment plans that charge students a percentage of their future income in return for instruction. App Academy graduates who find jobs as developers can elect to pay 18 percent of their salary over six months to cover the cost of tuition. They only charge tuition after the graduate gets a job.

Other firms have set up tuition reimbursement plans for students who take jobs with partnered employers. Hackbright graduates can get a \$3,000 reimbursement if they accept a full-time offer from a firm in the Hackbright’s network (which includes employers like Facebook, SurveyMonkey, Eventbrite, and Square). Flatiron School has a similar reimbursement plan (\$4,000 for students who find a job through the school’s placement program).

These tuition dollars constitute the main source of revenue for learning accelerators. According to Course Report, the revenue from full-time courses across all schools in 2014 totaled about \$59 million, but that number is likely conservative. If we consider a typical course, it consists of about 20 students paying \$11,000 per course, producing about \$220,000 per course. A school that offers ten courses per year would produce annual revenue of \$2.2 million per site. Multiply that by the number of sites across the nation and it becomes obvious why the sector has the attention of venture capital firms.

More important for the sector’s longevity, learning accelerators appear to be benefiting their students. One estimate suggests that completing a programming course resulted in a 44 percent increase in student salaries—an average bump of \$25,000.²² General Assembly reports that 90 percent of their graduates are placed within 90 days of completing the program. The data science program at gSchool boasts a 93 percent placement rate and an average starting salary of \$114,000.²³ The Flatiron School commissioned an independent accounting firm to complete a jobs report on recent program graduates. The report found that 94 percent of job-seeking graduates were placed within 120 days of completing.²⁴ Indeed, across these seven prominent providers, publicly available information suggests that placement rates range from 90 percent to 99 percent.

“I define ‘success’ for this entire category in terms of this: ‘Are these people really getting jobs or not?’ Period. Everything else is irrelevant,” says Adam Lovallo.²⁵ On that score, most of these young learning accelerators are passing, some with flying colors.²⁶

What’s the secret to these high placement rates, especially in light of the soft labor market for recent college graduates cited above? David Bergeron, a long-time Department of Education official who now writes about higher education innovation at the Center for American Progress, observed that these organizations do more than just provide students with job skills. As Bergeron told us, they also create a structured on-ramp to the workforce that is often missing at traditional colleges: “Many people need some structured interaction with the labor market after college, but they don’t get it from their career services office. Traditional colleges have career counseling and services, but it is not a structured approach to introducing students to the employers that may hire them.”²⁷ The best learning accelerators provide an entrée into the tech industry through the companies they’ve partnered with and others that have come to know their reputation. As Kevin Carey, the Director of the Education Policy Program at New America, wrote about Dev Bootcamp in his book *The End of College*, “the best practical training program, therefore, isn’t designed to teach people everything they need to know how to be good at a profession. It’s designed to teach them just enough to successfully *start* a profession” (emphasis in original).²⁸

Obviously, the rapid growth in enrollments and new firms does not mean that everyone who can pay and enroll gets his or her dream job. Student success varies according to the student’s background and behavior, the courses they take, the market they are in, their connection with instructors, and more. There are plenty of stories of someone taking a career risk—and it not working out.²⁹ At their best, accelerators provide an intense period of training that can help a student improve their probability of success. But students should enroll with eyes wide open, understanding that there is variability in costs and quality across the different providers.

REGULATORY ENVIRONMENT

Not surprisingly, the rapid growth of the sector has put regulators on their guard. After all, these providers charge tuition and, to the extent they market at all, advertise their ability to help graduates land jobs. Though the current crop of large schools is remarkable for their rates of success, chances are good that other, lower-quality offerings will emerge to capitalize on the growth of the sector. As one regulator reminded us, “from the time we’ve had computers, we’ve had people starting schools” to teach computer programming. Technology is an industry that has featured both “entrepreneurial and nefarious characters . . . who have taken advantage of students in the past.”³⁰

The issue is not whether regulators should oversee these programs, but how to update their policies to protect the state residents who are interacting with these new providers. In theory, the regulators’ goals should be aligned with those of providers: to ensure that investments pay off for students, and to ensure that new entrants will operate as a lasting business.

That being said, questions remain about how state regulators will apply or adapt their existing approach to licensure. There are a few distinct challenges.

First, the agency responsible for this work varies across the states. In some states, such as Illinois, they fall under the authority of the Board of Higher Education. In Washington, they are under the jurisdiction of the Workforce Training and Education Coordinating Board. In Massachusetts, they fall under a consumer affairs body, the Division of Professional Licensure, an agency within the Office of Consumer Affairs and Business Regulation. Each state comes at it with a different perspective and a different regulatory framework.

Second, the sector boasts a wide variety of models, from in-person, brick and mortar providers with faculty to online-only, peer-to-peer learning programs. This requires regulators to figure out whether the program would fall under their authority. If so, they will need to determine how their existing regulatory model would apply and whether a single approach to regulation makes sense.

Third, the timing of existing approval processes does not lend itself to curriculum and program offerings that are constantly changing to reflect new developments in technology and employer demand. In many states, approval processes take multiple months to more than a year. During this time, a learning accelerator may change their offerings multiple times while their application is being evaluated. What was proposed nine months ago might look little or nothing like the current offering. As Jon Stowe of Dev Bootcamp pointed out, “our curriculum changes in response to employer needs as often as every three weeks . . . Reconciling [this] with existing laws is important in order to enable the truly innovative aspects of what we do.”³¹

What are states doing to address these challenges? A review of a few key states is helpful:

- » In New York, the Bureau of Proprietary School Supervision (BPSS) oversees the licensing of private career schools. It has traditionally protected students enrolled in non-degree granting proprietary schools from inadequate job training and unforeseen school closure. While this duty remains critical, legislators realized they also needed to ensure that it did not get in the way of the fast-changing marketplace. In 2011, NY lawmakers passed S04268, a bill to align the agency’s current oversight of these schools with “the growing needs and demands of business and industry.”³² It created a candidacy status for education providers undergoing the process of applying for regulatory approval, allowing the agency to both encourage innovation and refocus its oversight duties on the new entities.
- » In California, the Bureau for Private Postsecondary Education (BPPE) provides oversight of private postsecondary educational institutions operating in the state. State legislators created it as the as the successor to the Bureau for Private Postsecondary and Vocational Education (BPPVE). It sunset in 2009, however, partly because its regulations were “overly burdensome” and the entity was not nimble enough to be effective.³³ BPPE’s charge is the opposite—focusing on the right balance of student protection and the advancement of state economic interests. There is much debate as to whether BPPE is successful in that effort. Recently, after sending a set of learning accelerators “cease and desist” letters, BPPE has worked with state legislators to create a task force to study the ways that these new organizations interact with existing state regulations. The task force’s goal is to “review standards for educational and training programs specializing in innovative subject matters and instructing students in high-demand technology fields for which there is a demonstrated shortage of skilled employees.”³⁴ The review will be complete by the end of the year.
- » In Georgia, the Nonpublic Postsecondary Education Commission (NPEC) is responsible for authorizing the operation of both degree and non-degree granting schools. In recent years, the agency has focused its efforts on developing clear and accessible consumer protection standards that allow it to support and encourage the state’s growing proprietary education industry. “Proprietary education has become more acceptable to Georgians who want to obtain a degree, a diploma, or to enhance skills to compete in the job market,” observes William C. Crews, the former NPEC executive director. “Because of this increased public acceptance and demand, Georgia proprietary education is a multi-million dollar enterprise” and the agency has begun to redesign its services to create space for that enterprise in the state.³⁵
- » In Illinois, the state’s Board of Higher Education is charged with oversight of private business and vocational schools. Recently, the board assumed this responsibility from the Illinois State Board of Education and has been ramping up its capacity to evaluate and oversee a variety of learning experiences as part of the state’s workforce program. “We want to elevate the good work of the new sectors,” says Jim Applegate, Executive Director of the Illinois Board of Higher Education. “We can do this by connecting credentials, whatever they may be, with employment and career implications to make sure the investment has value. We also need to coordinate these programs with existing career pathways. We do not want to have dead-end roads, but pathways that work together to accelerate progress to career and degrees.”

- » In Washington, the Workforce Training and Education Coordinating Board regulates private vocational schools in the state. The board has jurisdiction over the state's near \$1 billion workforce development system, and it executes its duties in coordination with state labor, business, and government entities. As a part of this work, it licenses and regulates the private career schools doing business in the state and collects student-level data about the programs offered and the awards earned by graduates. This data helps the agency to bridge the gap between high-demand jobs and the training workers need to succeed.³⁶

Across these states, it is evident that policymakers and regulators recognize that learning accelerators can be a real boon to their workforce training systems. Many are willing to rethink the regulations that might create obstacles for the sector, but that will is tempered by a healthy dose of caution. The fast growth of the sector all but guarantees that fly-by-night market entrants will follow in the footsteps of successful firms. This will happen sooner rather than later, and it will force regulators to find a way to ensure that they protect consumers and that the employers and graduates benefit from the programs. To get this right, they will need the help of private employers.

THE ROLE OF EMPLOYERS

Regulators typically look at the financial solvency of the business model and the inputs of the education program such as faculty credentials, curriculum, facilities, and so on. Those inputs are relatively easy to evaluate, but they do not directly measure the key issues of consumer risk and the value of the program for employees and employers.

Employers could do two things to help to regulators better understand these issues:

- » **First**, employers could provide clearer information about their market needs. This would help regulators identify imbalances in the supply of and demand for programs, which is useful in allocating their limited time and resources. The combination of high-cost offerings and low market demand, for example, is a signal of low program relevance and increased risk of consumer exploitation. Some state licensure boards, like those in Washington, DC and Maryland, already do this kind of analysis. They require applicants to provide an assessment of the market need for the skills they plan on teaching. Employers themselves are in a good position to furnish this information.
- » **Second**, some programs, like General Assembly, are developing program credentials. The credentials are competency-based achievements that demonstrate mastery of curricula.³⁷ They are developed in collaboration with companies, but ultimately it is the employer that can validate the value of the credential. Did it help the employee reach the desired level of productivity? Did the employee arrive with the expected skill set? If such validation information were clear and more commonly available, it could help regulators better understand the value of the programs to both employers and graduates. Such data could potentially help regulators to accelerate their review, allowing for something like a fast-path or candidacy-status for those programs with well-regarded credentials. The information could also, one day, even substitute for some of the incongruent input measures that regulators now rely upon to oversee learning accelerators.

According to Jim Applegate, the Executive Director for the Illinois Board of Higher Education, this type of employer information would be extremely helpful. “We work closely with employers, but we are not yet getting this kind of information from them. It would be helpful for them to be more articulate about the competencies and learning programs that they need. The more they can articulate these objectives, the more the regulating bodies can move in that direction.”³⁸

This information could also help invigorate the meaning of “value” of workforce training programs for workers and employees. “As we rethink our workforce training systems and close the skills gap, we need a paradigm shift in this country that moves us toward demand-driven, employer-centric systems,” says Jason Tyszko, Senior Director of Policy and Programs at the U.S. Chamber of Commerce Foundation. “Employers need to play an expanded leadership role for this to happen.”³⁹

Whether private employers, learning accelerators, and policymakers can work together to gather and leverage this new information on student success will be one of the many important questions to monitor going forward.⁴⁰

TOP 10 CONSIDERATIONS FOR POLICYMAKERS

As the learning accelerator sector is poised for further growth, policymakers are faced with a range of considerations in their efforts to ensure program quality and consumer protection. Based on our research and engagement with both industry participants and regulators, we have identified the following themes to watch:

- 1. Outcomes Based Accountability:** For years, reformers have argued for a shift in postsecondary accountability policy away from input-based evaluation toward the measurement of outcome metrics, including completion rates and the financial return on investment. Identifying the metrics that matter and capturing data necessary for consistent measurement has, however, proven challenging. Given the targeted focus of learning accelerators on career training, policymakers might consider how outcome measures might be used in the regulatory process. Options include creating flexibility in the state approval process and support for programs with employer-validated credentials or for programs that demonstrate significant workforce impact.
- 2. Transparency:** It is difficult to find comprehensive, consistent information on the costs and outcomes of these programs. Placement rates that are cited in the media may not always be accurate, and summarizing program offerings and costs is challenging because these programs constantly change. Efforts exist to collect basic information on the industry and provide it to prospective students, but they suffer from the same limitations. Could industry-led efforts to boost transparency help improve market function? Flatiron School's verified jobs report could provide one potential model.
- 3. Consumer protection:** State policymakers have a responsibility to balance consumer protection with a commitment to flexibility and an embrace of models that generate positive economic outcomes. What student protections will prove most important over time?
- 4. Consistency of Regulation:** Inconsistency in regulation across states can be a barrier to innovation. As the Center for American Progress' David Bergeron pointed out, "states have a very unclear definition of what constitutes a postsecondary education. It's tremendously inconsistent, and when you think about what limits innovation, inconsistency is high up on the list."⁴¹ Will states address this by moving toward more cross-state consistency? Will there be more sharing of lessons and best practices across the agencies? The findings of the California task force could affect how other states approach these questions.
- 5. Who Pays?** Should learning accelerators welcome the prospect of federal money? Learning accelerators are currently funded predominantly through private pay models, but that may change. The federal government has been quick to consider learning accelerators in conjunction with its workforce and training goals. For instance, the Veterans Administration recently called for proposals from learning accelerators as part of a \$10 million program designed to teach new job skills to veterans. In March, the White House also announced a \$100 million TechHire program through the Department of Labor. How will the federal funding and related regulations impact the programs?
- 6. Expanding the Student Pool:** The federal investments will expand the student population beyond a relatively homogenous group. This will test the sector and its impressive track record of employment outcomes. As Dev Bootcamp's Jon Stowe pointed out, "immersive learning is not a panacea and it is not for everyone."⁴² Will the sector be able to grow and deliver consistent successful outcomes as the student population diversifies?
- 7. Accreditation:** As Congress takes up re-authorization of the Higher Education Act, the role of and design of the existing accreditation system is in play. Could alternative accreditation models emerge that would potentially open up the door for federal financial aid to this new sector?

8. **Local Incentives:** States and municipalities have worked to attract learning accelerators to help meet their communities' technology workforce needs. What is the state role in attracting new models? How will Governors evaluate product-market fit? Can the accelerator model be extended beyond tech hubs and urban centers?
9. **Beyond High Tech:** Up to now, learning accelerators have been predominantly located in areas that have an existing high-tech industry and built-in demand for high-skilled workers. Will technology firms continue to demand the services of learning accelerator graduates or will demand flatten? Will the model expand into other sectors including allied health and robotics? What is the range of that potential expansion?
10. **Relationship with Traditional Higher Education:** Traditional colleges are under intense pressure to prove the value of their degree and certificate programs. What impact will learning accelerators have on traditional institutions of higher education? Might colleges and universities partner with accelerators to offer programs for credit? How might university or community college partnerships expand access to public funding for high-quality programs? Will community and technical colleges duplicate the types of offerings provided by learning accelerators?

There are plenty of questions before the new sector, but there is no doubt that it will continue to affect our workforce training and postsecondary systems. The emergence of the sector is already influencing discussions about “demand-driven” and “employer-centric” workforce training programs.⁴³ It is changing the way policymakers approach the balance of consumer protection and workforce training innovation, and it is serving tens of thousands of students, graduates, and their employers. The magnitude and speed of the impact, however, remain to be seen. That will turn, in part, on which states and municipalities demonstrate what can be done to leverage this new opportunity over the next year, and how their leadership will influence other state leaders.

APPENDIX A: SELECTED LEARNING ACCELERATORS

Listed Alphabetically

Name	Year Founded	Primary Offerings	Sites
App Academy	2012	Web Development	New York City, San Francisco
Dev Bootcamp	2012	Web Development	Chicago, New York City, San Francisco
Flatiron School	2012	Web Development, iOS Development, Front-End Development, Data Science	New York City
Galvanize's gSchool	2012	Full-Stack Web Development, Data Science	Denver, Boulder, Fort Collins, San Francisco, Seattle
General Assembly	2011	Web Development, User Experience Design, Product Management, Data Science, Mobile Development, Business Fundamentals, Digital Marketing	New York City, Los Angeles, Boston, San Francisco, Seattle, Atlanta, Chicago, Austin, Washington DC, Sydney, Melbourne, London, Hong Kong
Hack Reactor	2012	Web Development	San Francisco, Austin
Hackbright Academy	2012	Software Engineering Fellowship exclusively for women, Back and Front-End Development Courses	San Francisco

ENDNOTES

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