GROWTH OPPORTUNITIES in HIGHER EDUCATION

Degrees and Alternate Pathways
INTRODUCTION

Higher education is becoming increasingly commoditized. With more than 450 new providers offering online degree programs between 2012 and 2014\(^1\) and 3.5 million students studying online in 2016,\(^2\) delivering education online is no longer optional for colleges and universities. Instead, it is an expected part of the higher education experience.

Once the question of whether to offer online programs was answered with a resounding yes, colleges and universities next focused on offering a balanced portfolio of programs that appealed to a wide array of students and assisted them in attaining their career goals. The ubiquity of online learning, however, means that institutions must do even more to stand out.

Choosing the right programs that meet the needs of students both today and in the future can help colleges and universities stay relevant and effectively combat the intense competition from both for-profit and nonprofit institutions. But that alone is not enough. Today, and in the future, colleges and universities need to consider all the sources of learning adults gain throughout not only their academic careers, but rather, throughout their lifetimes. Then, institutions need to consider how they can validate and offer corresponding learning opportunities.

The Learning House, Inc., conducted research to identify the online programs we believe offer the best opportunity for growth for institutions, using labor insights from CEB TalentNeuron, a best practice insight and technology company, to uncover the hiring trends and in-demand skills that new graduates will need to be competitive in the labor marketplace. This report cites labor trends throughout from the CEB TalentNeuron real-time job posting analytics tool, and updates some of the degrees and findings from the *15 Online Degrees for the Future*\(^3\) report, published in 2014. As Learning House predicted then, new programs such as data science have exploded onto the landscape and will continue to be vital to the future economy. At the same time, established fields, such as computer science, continue to grow to meet the job market’s demand for trained computer coders.

“Today, and in the future, colleges and universities need to consider all the sources of learning adults gain throughout ... their lifetimes.”
These same market forces that have spurred growth for specific degrees have also created the need for alternative pathways for learning that will continue to reshape the higher education landscape for years to come. Some of these modalities, such as bootcamps and microdegrees, are new paths to attaining an education and can fall outside of the realm of a traditional college or university. Others, such as stackable certificates, represent a new way to present a degree pathway to students to help ensure their persistence and success in a traditional program.

As higher education continues to evolve, innovation will come not just in the field of study offered, but also in redefining the very nature of what a credential is and how it should be delivered. As students continue to require new skills and need to gain those skills as quickly and inexpensively as possible, colleges and universities will need to compete not just with themselves but also with the numerous education ventures that are reacting to this need and developing outside of the traditional institutional model. To stay relevant, colleges and universities will need to adapt to these forces pushing for new ways to quantify and validate learning, break down the traditional degree in terms of size and length of time, and create new entry points for learners to enter higher education.

These ideas lead to the final section of the report, where the importance of tracking and quantifying learning, and the new models that are emerging to do just that, are examined. As students continue to learn both within and outside of higher education institutions and demand that all of their learning be quantified for employers, higher education must become more flexible in how, where and what it offers students, and ensure that the mastery of topics is measured and verified.
SECTION 1: ONLINE DEGREES FOR THE FUTURE

Sixty-two percent of online college students\(^5\) decide what program they are interested in before they decide which school they wish to attend. This shows the importance of having the right programs, because if an institution does not offer the program a student wants, it is missing out on those students. The list of degrees below represents a mix of programs at multiple levels that appeal to a wide audience of potential students.

In this first section, Learning House highlights a variety of programs that represent in-demand fields. Not all of these degrees make sense for all institutions, and these degrees are not intended as a one-size-fits-all solution. Each institution needs to consider its local job market, reputation and brand when deciding what programs should be offered. However, Learning House believes that within this list, institutions should be able to find programs that work for them and that these fields will see significant growth in the future.

**Bachelor’s – Computer Science**

As the world becomes increasingly connected and our businesses rely ever more on technology to perform critical functions, the demand for well-trained information technology (IT) employees is projected to grow 12% from 2014 to 2024, which is faster than the national average, according to the Bureau of Labor Statistics (BLS)\(^6\).

CEB TalentNeuron shows that there are currently nearly 104,000 openings for computer programmers and software developers requiring a bachelor’s degree for entry.\(^7\) More than 20,000 of these openings require less than two years’ worth of experience and have a median salary of $101,000. The trend in the total volume of openings each month has been on the rise as well, growing from approximately 140,000 positions in March 2014 to 178,000 in February 2016.

It is vital that the computer science programs of the future not focus solely on the theory of computer science and programming, but also teach the practical skills needed in the workplace to ensure the next generation of programmers is being minted.
Java, SQL, JavaScript, Linux, C#, .NET and Python are the most common languages and systems that employers are seeking from qualified candidates, according to CEB TalentNeuron. Although jobs for iOS and Android app development or for those who learn the latest programming languages have a prestige factor, the vast majority of open jobs are for those who know some of the oldest and most long-standing languages. Legacy systems remain in place at many companies, including some of the largest in the world, and those employers need experts in those languages.

Institutions have also seen strong student demand for these credentials. Conferrals have grown an average of 18.6% annually over the last five years. And yet, competition among these programs is low. According to the National Center for Education Statistics’ Integrated Postsecondary Education Data System (IPEDS), there were only 26 colleges and universities offering an online computer science bachelor’s degree program out of the 550 providers in 2014 (4.7%).

**Bachelor’s – Health Information Management**

As noted in our previous report, the American Recovery and Reinvestment Act of 2009 required that all public and private healthcare providers adopt electronic medical records (EMRs) in order to maintain their existing Medicaid and Medicare reimbursement levels. Health information managers play a vital role in maintaining these records.

The importance of health information managers is borne out by the job numbers. In March of 2014, there were 4,600 postings for health information managers that required a bachelor’s degree, growing to more than 6,000 in February of 2016, according to CEB TalentNeuron.

Health information management requires a number of hard skills such as familiarity with ICD-9 and 10, which are the healthcare codes used by the insurance industry and required by the federal government, as well as electronic medical records systems. Bachelor’s degree programs need to focus on training these practical skills to remain relevant.

**Bachelor’s – Market Research**

The field of market research has seen a steady rise over the last two years, according to CEB TalentNeuron. In March 2014, there were more than 38,000 total positions posted in the area of market research that also required a bachelor’s degree. In February of 2016, the number of total positions had grown to more than 54,000.
IPEDS does track the field as “Marketing Research,” but only five institutions nationally reported conferring such degrees in 2014. It is more likely that the skill of market research is taught through a general program in marketing.

As we will mention with data science, the rise of big data means there is a need for individuals who can collect, process and make sense of data to help those in leadership positions make data-backed decisions. Whereas data science programs teach students to design, maintain and mine large datasets, market research focuses on the collecting of primary and secondary data to help understand markets, competitors and market conditions.

Currently, general degrees such as marketing may offer a course or two in market research or data science, but as demand grows and the field becomes more complex, entire degree programs may be required to develop the practical skills needed for success in the field. For such programs, CEB TalentNeuron notes that skills such as knowledge of SQL and use of software packages like Statistical Analysis Software (SAS) are typically required by employers. Therefore, Learning House recommends this should be a focus in the degree programs.

**Bachelor’s – Digital Marketing**

Digital advertising continues to grow, with more than one-third of CMOs saying that digital marketing will account for 75% or more of their spending within the next five years. Top titles for these positions are “digital marketing manager” and “digital marketing specialist,” demonstrating how the demand for this skill has grown so much that it has created new positions within marketing teams that likely did not exist 10 years ago. Given the shifting nature of marketing, higher education needs to evolve how it teaches the next generation of marketers.

IPEDS does not track digital marketing degrees specifically, as this is an emerging subset from general marketing programs. CEB TalentNeuron does show the job market is on the rise, however. In March 2014, there were more than 21,000 total posted positions searching for individuals with digital marketing knowledge; by February 2016, that number had grown to nearly 38,000 positions.

A digital marketing degree should focus on new and evolving marketing channels, such as search engine optimization (SEO) and search engine marketing (SEM) as well as social media marketing. The
CEB tool notes some of the most popular hard skills requested by employers searching for bachelor’s degree holders in the field are SEO, SEM, Google Analytics, Salesforce and Adobe Photoshop. As digital marketing has grown, students will need to also have expertise in paid and unpaid social media marketing, paid media marketing and inbound marketing. Additionally, with Google updating its algorithm for search results daily, curriculum for a digital marketing program may also need to be constantly evolving.

**Bachelor’s and Master’s – Data Science**

Much like with information technology, economies are increasingly reliant on big data for decision-making. This rise in data collection has been recent and explosive; in 2000, 25% of the world’s data was digital. In 2013, less than 2% of all data was nondigital. And the amount of data collected doubles approximately every three years. Data is being collected by nearly every industry, from business to healthcare, and the need for individuals who can manipulate these data and make actionable recommendations based upon them is growing.

There are currently more than 6,000 job postings searching for those with data science expertise in the United States, and that trend is growing. In March 2014, there were barely 2,000 total jobs posted for Data Scientists; by February 2016, there were nearly 10,000, according to CEB TalentNeuron.

Many of these jobs are clustered in areas such as Silicon Valley, New York City and Seattle, according to the CEB tool, but the footprint is expanding across the country and even the world.

Not only are these jobs plentiful, they also are lucrative. The CEB tool estimates the median salary is nearly $120,000 for candidates.

The field is still emerging and not yet tracked by IPEDS. However, Learning House estimates as of January 2016 that fewer than 40 providers offer a credential in the field of data science, making graduates strong candidates for employment. With demand growing and competition low, students with skills in data science should be greatly valued both today and in the future.

Opportunities exist for both bachelor’s and master’s credentials in the field given the demand from the labor market. However, it appears that larger institutions, such as the University of Illinois, offer a master’s degree in data science as an offshoot of their computer science degree program. Johns Hopkins University offers a graduate-level MOOC certificate in data science as well.
Bachelor’s and Master’s – Project Management

Project management is a skill that is widely applicable across multiple industries. It is so popular, in fact, that it is a required skill in more than 190,000 current job postings requiring either a bachelor’s or master’s degree. Top industries using project managers are technology, finance, manufacturing and healthcare.

In 2014, there were more than 1,000 project management bachelor’s degrees conferred, along with more than 1,200 master’s degrees.

As the skill is so broadly applicable, institutions should consider both a bachelor’s and master’s degree for offering the skill. Project management can come in the form of a stand-alone program or as a concentration to an industry-specific program, such as a bachelor’s degree in business administration with a project management focus.

Programs can be structured to lead to Project Management Professional (PMP) certification but do not necessarily have to, as this certification is not always required by employers. According to CEB TalentNeuron, a little more than 8% of job postings listed PMP certification as required. Programs can focus on creating a portfolio of work examples to prove competency and value to potential employers in lieu of the PMP certification.

IT project management programs are tracked separately by IPEDS. There were only 562 total conferrals in 2014 combined between bachelor’s and master’s programs. In recent years, large for-profit providers, such as Capella and American Public University (APU), have entered the online market with IT project management programs. UMASS Online just launched a badge program in project risk management that follows the guidelines laid out in the Project Management Body of Knowledge by the Project Management Institute, which also grants the PMP certification. This style of program, as we will discuss in the second section of this report, can allow someone to acquire this project management skill in rapid fashion compared to a full degree program.

5-Year Master’s – Accounting

With the BLS projecting double-digit growth for accountants and auditors between 2014 and 2024, and CEB TalentNeuron also showing an upward trend in employers seeking accounting candidates,
institutions have also seen consistent growth in accounting master’s programs. Between 2010 and 2014, accounting master’s programs offered grew an average of 10.3% each year. Conversely, bachelor’s in accounting programs shrunk an average of 0.3% each year over the same time period.

These growth patterns likely can be attributed to the changing requirements for the Certified Public Accountant (CPA) certificate. To sit for the CPA exam, a candidate is required to have 150 hours, or credits, worth of education. A bachelor’s degree typically consists of 120 credit hours, making a master’s degree one of the fastest ways to earn the credential needed.

Employers have yet to catch up to this shifting trend. CEB TalentNeuron shows many more open positions requiring at least a bachelor’s degree (35,700) compared to a master’s degree (632). CEB TalentNeuron also shows that 42% of the current job postings for accounting occupations that require a bachelor’s degree also require the CPA certification. For those that ask for a master’s degree, 65% of the openings also require the CPA certification.

An innovative way to help students meet this CPA requirement is to offer an all-in-one, five-year program that allows students to enter as an undergraduate but exit with a graduate degree. A five-year accounting program typically has students start their graduate courses during their senior year with these courses both satisfying the undergraduate and graduate degree requirements, shrinking the time needed for the master’s degree from two years to only one. This can help reduce the number of students who choose to pursue a master’s degree at a later time, and at a different institution.

MBA – IT Management

With the growth of IT professionals, there is also a growing need for those who manage technology teams and are in the position of reporting back to the larger corporate body. IT managers sit both in the “IT world” and “corporate world” and help communicate the goals of the company to their technology team as well as communicate the needs of their team back to corporate leadership.

Increasingly, as documented in the 2014 version of this report, an MBA is seen as being able to provide these IT leaders with the necessary business skills for them to sit in these two different worlds. Top “soft skills” that employers are seeking, according to CEB TalentNeuron, include “oral and written communications,” “project management,” and “problem-solving.” These skills are more likely to come from an MBA program than from an M.S. in Software Engineering program.
IT management master’s degrees have been increasingly popular with students, according to IPEDS. In 2010, there were 803 such degrees conferred, growing to more than 2,200 in 2014. It is unknown how many MBA programs offer an IT management focus.

**Master’s – Speech Pathology**

Speech language pathology is the study and treatment of speech and language issues. With more than 10,000 positions currently open, according to CEB TalentNeuron, speech language pathologists continue to be in demand nationwide. A master’s degree is the entry-level credential for the occupation. Interestingly, some of the top employers are rehab hospitals and assisted living facilities, debunking the perception that speech pathology is primarily for children. “Geriatrics” is a close No. 2 hard skill behind “pediatrics.”

To meet this need, the number of degrees being conferred has also been on the rise over the past four years. Between 2010 and 2014, the number of master’s degrees in speech pathology grew on average by 12% each year. According to IPEDS, only seven of the 89 providers offered their program online in 2014.

There also is a need for bilingual and Spanish-speaking speech pathologists, which could offer institutions a niche but valuable concentration to help differentiate themselves.

**Doctoral Degree Programs**

In the previous version of this report, it was noted that the Doctor of Occupational Therapy was a “degree to watch.” In this report, Learning House would like to expand this recommendation to multiple doctoral programs. IPEDS notes that only 4.4% of doctoral programs were online as of 2014, a far lower rate compared to bachelor’s (8.1%) and master’s (16.4%) degree programs.

Several fields of study at the doctoral level lend themselves well to online delivery. In *Online College Students 2015: Comprehensive Data on Demands and Preferences*, it was reported that business, healthcare and education are some of the most popular fields of study for online college students due to the practical focus and strong job opportunities. The practical nature of these fields also opens
up possibilities for doctoral-level credentials such as the Doctor of Business Administration (DBA), Doctor of Nursing Practice (DNP) and Doctor of Education (Ed.D.). Doctorates are also on the rise, but graduates are finding it more difficult to find employment. STEM fields and doctorates in humanities fields are increasing in popularity, but graduates are finding employment more difficult.

Best practices in nursing credentials are changing. In 2010, the Institute of Medicine of the National Academies recommended the number of nurses with a doctorate to be doubled by 2020. Online education has played a key role in helping nurses earn their BSN and MSN degrees and should play a role in attempting to meet this 2020 goal and beyond.

Much like the DNP degree, both the Ed.D. and DBA are practitioner degrees. The Ed.D. can be used for advancement in academic administration settings where the job requirements dictate a doctorate is needed, such as a school superintendent or college vice president. A DBA can be used to become a member of a business school faculty or for research but can also be used in the private sector by those in the field of business consulting.
SECTION 2: ALTERNATIVE LEARNING PATHWAYS FOR THE FUTURE

Degree alternatives are not a new or revolutionary idea, as more than 11 million adults with no college experience still hold a certificate or license, typically granted by professional organizations rather than academia. What is new is the questioning of the value of the traditional four-year college degree. With costs spiraling and student loan debt ballooning, offering alternatives is becoming increasingly important. The list of alternatives below, some new and some not, hold the promise to expand access to higher education, reduce the cost of that education and produce a more educated workforce faster than if students took the traditional path toward that education.

Competency-Based Education

Competency-based education (CBE) is designed to allow students to learn skills rather than concepts. It does not follow a traditional term or semester path. Instead, it measures what is learned rather than how long is spent in the classroom, which the credit hour system has been criticized for. Once a student demonstrates mastery of a skill, he or she can move on to the next course, regardless of how long was spent learning the skill.

In 2015, there were more than 600 institutions adopting competency-based education (CBE) degrees and courses—up from only 52 the year before. Western Governors University (WGU) is the largest provider of CBE, having designed all of its online degree programs dating back to 1997 in a CBE style. WGU boasts more than 60,000 students in these programs.

The system allows students to not only show that they have mastered a skill, it also allows them to speed through a program faster at some points, assuming they already have mastered certain competencies. For example, if individuals have previous work experience in accounting and then take a CBE accounting program, they theoretically could work through that program faster than if they went to a non-CBE program where they would be forced to work their way through each course in the degree sequence. Therefore, CBE may be able to shorten the time to degree, saving students money and potentially improving retention and graduation rates.
**MOOCs**

Massive Open Online Courses (MOOCs) continue to be a very popular avenue for students looking to learn about a single topic. Most MOOCs remain free, but as their popularity increased, the question of credentialing arose. How could successful completion of a MOOC or series of MOOCs be tracked? Should credit be awarded? Should a certificate or other credential be considered? Multiple options have been developed that aim to address these very questions and also help colleges and universities monetize these “free” courses.

Arizona State University recently started the Global Freshman Academy, a partnership with MOOC provider edX. In this academy, students can take three MOOCs for free. Upon completion, students would have their identity verified and be able to pay $200 per credit to receive three credits for each completed course. In the first cohort of learners, less than 1% completed the MOOC and were eligible for credit. This is not necessarily a result of the Global Freshman Academy; however, low completion rates have been an issue with MOOCs overall. MIT’s MicroMaster’s program operates somewhat similarly to the ASU and stackable certificate model, and students also take half of their coursework through the MITx MOOC certificate program before completing the final section of the degree on campus at MIT.

The University of Illinois offers an iMBA program with Coursera where students combine MOOCs with for-credit online courses to earn an online MBA at a reduced price. Georgia Tech partnered with both AT&T and Udacity to develop an M.S. in Computer Science degree that allows students to earn their degree from Georgia Tech at a fraction of the cost and also be considered for employment with AT&T upon graduation. Each of these programs helps standardize the value of MOOCs by providing some form of academic valuation to the free or low-cost content, helping employers place value in MOOC learning as well.
Bootcamps and Microdegrees

The idea behind both bootcamps and microdegrees is to reduce the time and money needed to learn a specific skill that is highly needed in the workforce. Both of these alternate pathways focus on skills, with bootcamps often linked to job placement upon completion and microdegrees focusing on offering a “credential” or validation of learning upon completion.

Bootcamps

Bootcamps, such as The Software Guild, General Assembly and Dev Bootcamp, typically focus on a specific skill set, such as coding, and are taught in intensive 10- to 12-week formats. The focus is on providing students with skills needed for employment and to help ensure success. Bootcamps can have pretesting and initial coursework to prime students before they start the actual bootcamp. Students can choose to forego a four-year degree and instead attend a 12-week coding bootcamp to learn a specific programming language, preparing them to enter the workforce quickly. Job placement is often a compelling differentiator with these types of options, with many bootcamps boasting a job placement rate for graduates that is greater than 90%.

Microdegrees

Recently, six institutions, including the University of Wisconsin-Extension, started to offer microcredentials via the University Learning Store. These credentials are skills based and not university degrees. These programs are competency based as well, so students can quickly pass through lessons as they demonstrate a mastery of the material. The fact that University Learning Store’s providers of these credentials are colleges and universities makes it unique, versus for-profit providers of bootcamps and MOOCs.

Udacity offers microdegrees that it refers to as nanodegrees where it partners with Silicon Valley leaders such as Google and Facebook to develop short, nine- to 12-month programs for as low as $200 per month. Students can learn data analytics and front-end Web development from these industry leaders and know they will have the necessary skills for future employment as a result. Udacity notes the value of these partnerships in lending credibility to the curriculum and learning outcomes.
Badges

The concept of badges was developed a few years ago as a way of moving away from formal academic credentials and offering an alternative way to show “credit” for demonstrating a competency. From the Badge Alliance, a ‘digital badge’ is an online record of achievements, tracking the recipient’s communities of interaction that issued the badge and the work completed to get it.

The Alliance notes nearly 20 higher education institutions in the U.S. offer badges, for both formal for-credit and informal learning activities. Badges represent a solution to the problem of validating someone’s learning from an alternative learning environment such as a bootcamp or MOOC as well as for life experiences and outside-the-classroom learning, such as on-the-job training. They can act as an alternative for a transcript for those experiences.

As discussed earlier in this report, UMASS Online is offering its first badge program in project risk management. The program will allow students to demonstrate competencies throughout the coursework and allow students to accelerate themselves through the program. LinkedIn, through Lynda.com, is offering more than 50 “Learning Paths,” which are a series of Lynda.com instructional videos accompanied by quizzes. Upon completion, users are awarded an electronic certificate that they can display on their LinkedIn profile and other social media sites. The new skills can also be added to their LinkedIn profile.

Enterprise Partnerships

Education benefits for company employees are not a new idea, but during the latest recession, this benefit became rarer. Now, that trend is being revisited. According to a report from the Society for Human Resource Management, 54% of employers offer some form of tuition reimbursement. Now, the new partnerships being developed between industry and academia are expanding in scope. Walmart’s partnership with APU in 2010 was one of the first big partnerships to join an employer with an institution as a preferred educational provider. APU provided credit for Walmart work experience, provided employees grants to help lower their tuition bill and agreed to launch new concentrations in retail management as a result of the partnership.

The Starbucks partnership with Arizona State University (ASU) is a more recent example, where Starbucks employees can attend ASU at no cost. Both the ASU–Starbucks and APU–Walmart examples
show how large groups of individuals as well as the companies themselves can benefit through establishing a formal relationship with a college or university.

The partnership validates to the employees the company’s commitment to education and provides a clear path for the employees to enroll at the institution, dramatically shortening the search and application process as well as the marketing costs for schools associated with attracting students. Employers receive a more educated workforce and also, as in the APU–Walmart example, perhaps a chance to suggest specific curriculum, skills or areas of emphasis that they feel are lacking in their workforce. These programs also can increase employee retention and improve recruiting efforts.

**Stackable Certificates**

With “stackable certificates,” students can break a long degree program into more manageable chunks, earning certificates along the way. Colleges and universities can take their graduate or undergraduate degree programs and find logical groupings between the courses that would allow them to become nine- or 12-credit certificate programs. If a student completes all of the certificate programs, then he or she would be eligible for the degree award as well.

The University of Illinois at Urbana-Champaign’s master’s degree in data science will be structured this way using Coursera to break up the program into certificates that can be applied toward the full master’s program.

The benefit to this approach is that it creates shorter milestones of progress for the student to work toward rather than a finish line that could be years away. Equally, if students need to or wish to take time off away from their studies, they could attempt to plan that around one of these milestones and leave with a certificate in hand rather than an accumulation of credits and no degree.

Breaking a program into smaller sections can also aid in fields with ever-changing technology and career requirements. In Texas, community colleges partnered with the oil and gas industry to offer stackable credentials. The industry has changing training needs and the job market can fluctuate as well. The stackable option allows students to continually retool themselves so they can remain competitive in the job market and, if they are transferred for work, their stackable credentials can more easily be transferred to another institution rather than a series of credits.

With more than 30 million Americans having taken college-level coursework but with no degree to show for it, stackable certificates can be a way to show some form of progress for millions of individuals.
A “1+3” program is an early enrollment program where students can enroll into college-level courses for reduced tuition while still completing their high school diploma. They then have the option to apply and continue their studies at the college or university or take their credit to another institution. This can save students significant time and money in earning their degree.

West Virginia State University has a successful 1+3 option available for three counties to participate in. Students can take the first 30 credits of their degree while still in high school by taking “dual-credit classes” that count toward both their high school and college education.

The program touts that while saving the student both time and money, it also gives these young students the confidence that a college education is achievable for them. Courses are mainly general education courses, which makes transferring them to other institutions easier.
SECTION 3: ON THE NEAR HORIZON

Learning House has listed degrees to consider and identified some alternative pathways to education for the future, but one theme ran throughout all of these recommendations: the need to understand how learning is tracked and quantified, and a willingness to consider new ideas as to what constitutes an education. Higher education will need to learn to become even more flexible in how it allows students to learn and make their way down their educational path. Below are some additional new ideas around the big picture student lifecycle that universities will need to be prepared to address as a prerequisite to students on these alternative pathways.

“Higher education will need to learn to become even more flexible in how it allows students to learn and make their way down their educational path.”

Curated Degrees

A curated degree represents the idea that students are constantly picking up credits and experiences all while they enter and exit the higher education system and job market. Institutions that can accept these credits and give credit for certain experiences can help these students finally earn their degree. There are many sources of college credit, such as College Level Examination Program and Straighter Line, but the American Council on Education also puts out guidelines to assist colleges with credit for trainings such as military service.

Digital Transcripts

Digital transcripts are similar to badges in that students demonstrate not what institution they attended or what courses they completed but what skills and knowledge they actually have. Digital transcripts, such as Degreed (degreed.com), act as a portfolio of experiences and can include things such as books read and conferences attended as well as projects completed or worked on. The idea with a digital transcript is that a degree is very valuable and represents a body of work, but it is not the complete picture of what students know or have learned in their lifetime. LinkedIn’s Learning Paths program acts as a digital transcript by adding the verified certificate of completion and new skills to the user’s
LinkedIn profile. Users then get public acknowledgment of skills acquired from a trusted provider, while LinkedIn helps cement its reputation as a professional development and networking site.

Additional services also are emerging to enable institutions to enter the digital transcript space. Credly (credly.com) offers institutions leading platforms for verifying, sharing and managing digital badges and credentials.

Parchment (www.parchment.com) provides a similar service for transcripts and certificates of completion. It provides a platform for institutions and training providers to electronically send transcripts to students, who can then store them in their online profile on Parchment. Students can then share their transcripts with employers or other institutions electronically.

Skillful (www.skillful.com) acts as a job search tool built around the idea that an amassed skill set, rather than formal education, is of value to potential employers. The service allows individuals to enter their skills and then match them to potential employment opportunities. It also shows individuals additional sources of training they could acquire as well as providing career coaching. Skillful also works with higher education institutions to match the learner with the appropriate college or university.

**Lifelong Learning**

Stanford has introduced the idea of the Open Loop University where the idea of being an alumnus is banished as students would continually come back to the university at different stages of their career. Students would come back to learn a new skill or maybe even teach, depending on their experiences.

The current state of academia seems to say we should only attend college for a set period of time, and then it is over. An Open Loop University model, however, recognizes that we never stop learning. In an Open Loop University model, programs in a report such as this one would only be the first step on one’s educational journey. Students would return to receive updates on the skills within their program, such as a new coding language or update in policy, before returning to the workforce for another period of time. Stanford’s plan is that students have six years of open access, therefore allowing them to earn their degree but then still have time to come back to continue to learn.
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**ENDING NOTES**

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