Education Advisory Board | Community College Executive Forum

# Social Media and Mobile Applications

## Reshaping Curricula to Attract Post-Bacc Career Starters

Industry Futures Series, Volume 3

# Community College Executive Forum

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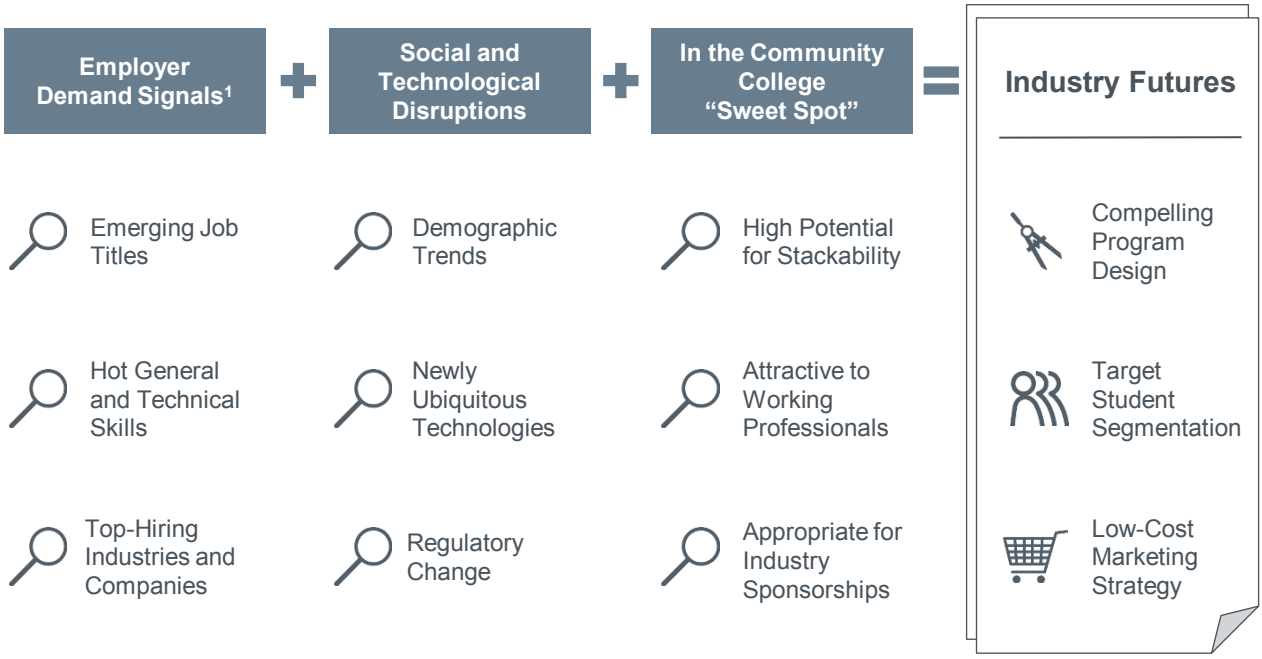
# Anticipating the Workforce Needs of the Next Decade

## Volume Three in a Four-Part Series

As technology reshapes industries and the workforce prepares for a mass retirement of Baby Boomers, higher education must anticipate the training deficits of the future while continuing to respond to current employer needs. The Industry Futures Series combines an analysis of employer demand signals (available through a partnership with the labor market analytics firm Burning Glass) with an examination of the social and technological disruptions shaping the next decade's workforce. The methodology outlined below aims to identify opportunities for community colleges to launch or redesign programs that align with emerging student and employer demand.

### Our Methodology for Identifying High-Demand Program Opportunities




The Industry Futures series identifies four opportunities for colleges to attract new students while addressing the needs of the local workforce. This third volume explores how to design certificates in social media and mobile applications that appeal to post-baccalaureate career starters in need of technical skills.

### Four Opportunities for Community Colleges to Do Well and Good

1) The real-time labor market data in this report comes from the Education Advisory Board's partnership with Burning Glass for use of Burning Glass's proprietary Labor/Insight™ tool.

# Study Road Map

1 The Post-Baccalaureate Opportunity

2 Emerging Programs in Social Media and Mobile Applications

3 Appendix: Assessing the Opportunity

# Underemployment's Long Shadow

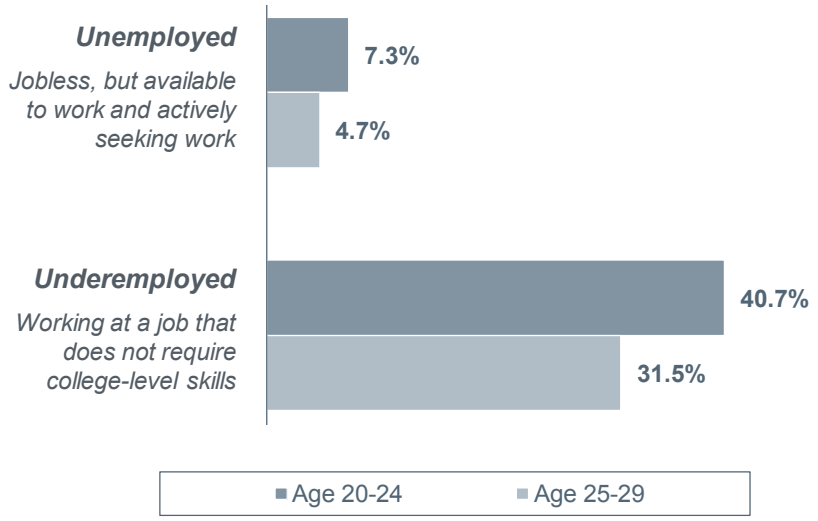
Since the start of the Great Recession, countless news articles have covered the unemployment crisis facing recent college graduates. Unemployment rates, however, understate the challenge. To provide a fuller picture of the job market, economists have started to pair this metric with a related one: underemployment. Bachelor's degree holders are underemployed if their jobs do not require a college education; for example, they may be working in food service or an entry-level clerical role. In 2012, economists at Drexel University's Center for Labor Markets and Policy estimated that over 40% of college graduates age 24 and under (and nearly one-third of those age 25 to 29) were underemployed.

Failure to secure a good first job can have a significant impact on lifetime earnings. Lisa Kahn, an economics professor at Yale University, studied a cohort of workers who graduated from college before, during, and after the recession in the 1980s. Students who graduated during the recession tended to earn lower starting salaries—and this disadvantage followed them through their careers. Almost 20 years later, the average recession-era graduate had earned a total of $100,000 less than the average worker who graduated into a more robust job market.

## Failure to Land Strong First Job Depresses Earnings Throughout Career

### Unemployment Masks Larger Problem

*Employment Status of Young Bachelor's Degree Holders, 2012*




### Lasting Consequences to a Slow Start

**1%** ➡ **−7%** ➡ **−$100K**

**Unemployment**

For every percentage point increase in national unemployment...

**Starting Income**

…starting incomes for recent graduates drop 7%…

**Lifetime Earnings**

and rarely catch up over the course of a career.

Source: Fogg NP and Harrington P, "The Employment and Mal-Employment Situation for Recent College Graduates: An Update," Center for Labor Markets and Policy, June 2012; Peck D, "How a New Jobless Era will Transform America," *The Atlantic*, March 2010; EAB interviews and analysis.

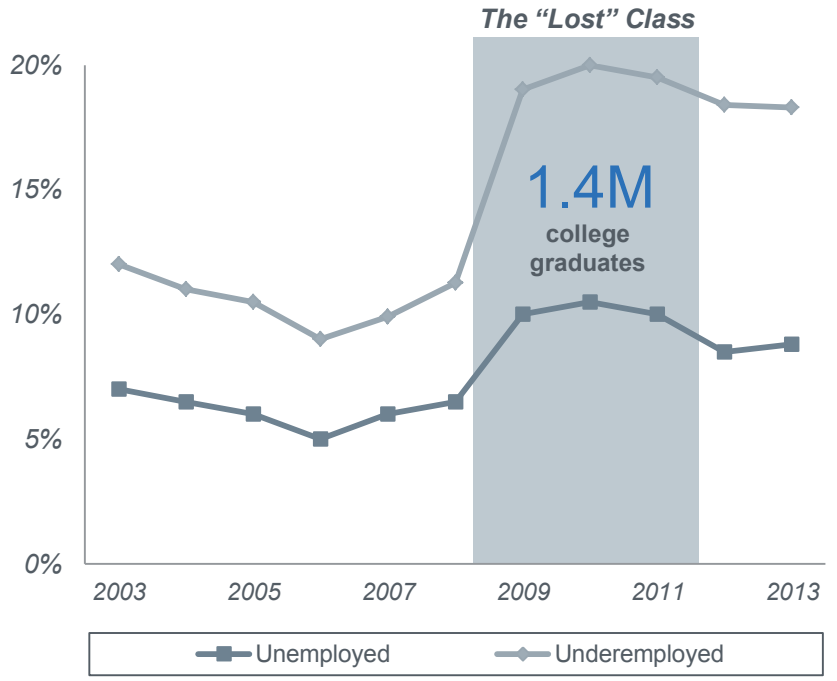
# Casualties of the Great Recession

The lasting impact of a low starting salary gained new relevance during the Great Recession. This chart draws on the Economic Policy Institute's analysis of employment outcomes by graduation year. From 2009 to 2012, an estimated 1.4 million bachelor's degree holders graduated into unemployment or underemployment.

Though the recession dampened hiring in nearly all fields, the weak job market hit liberal arts graduates disproportionately hard. After a few years of working in a job with limited earning potential (if any job at all), many liberal arts graduates are starting to look for cost-effective educational opportunities that open doors to more lucrative employment. Community colleges offer a broad range of short-term technical credentials that are especially well suited to provide these opportunities for these "career starters" who have recently graduated from universities.

## Large Pool of Late-20s Grads Seeking Career Reboot

**Unemployment and Underemployment Rates by Graduation Year**




**'No' to Baristadom**

"Three years in, graduates who haven't found steady work yet start to realize they need a different education to open doors."

*Program Director,*
*Public Research University*

Source: Heidi Shierholz, Natalie Sabadish, and Nicholas Finio, "The Class of 2013: Young Graduates Still Face Dim Job Prospects," Economic Policy Institute, April 2013; EAB interviews and analysis.

# Wanted: T-Shaped Professionals

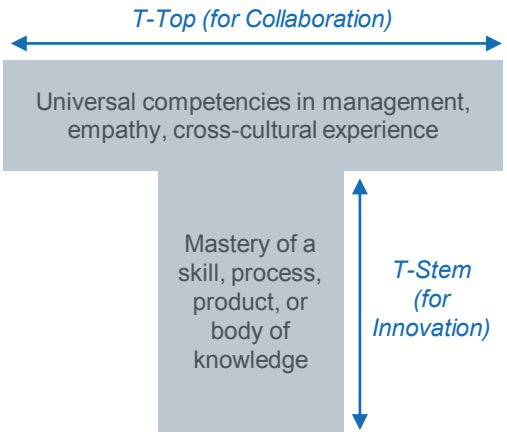
Employers commonly seek job candidates with technical skills and a liberal arts background. The diagram to the right represents the "T-shaped professional," a concept that leading technology and design firms have adopted to describe their ideal employee. The T-stem represents depth of knowledge in one area of expertise, while the T-top represents a breadth of knowledge that facilitates collaboration across fields. For example, a software engineer could have a T-stem composed of several programming languages and a T-top composed of business writing and communication skills.

With multinational employers such as IBM and Cisco describing their ideal employee as "T-shaped," a small but growing number of colleges and universities are starting to describe their ideal graduate in similar terms. For example, in 2013, President Lou Anna K. Simon of Michigan State University committed to graduating T-shaped students in her annual address to the campus community.

In the years to come, we anticipate that many workers in search of new job opportunities will seek training that completes their T-shape. For career starters with liberal arts backgrounds, technical skills best complement their existing degree.

## Employers Promote Two-Dimensional Ideal for New Recruits

### The T-Shaped Professional




### Entering College and University Parlance

MICHIGAN STATE UNIVERSITY

**Lou Anna K. Simon**
*President*

"[We must] lead the nation in our reputation for graduating T-shaped people whose frame of reference and skills are a combination of broad and deep—people who are work-ready and highly sought after in the new global, intensively technological, data- and innovation-driven workplace."

*Founders' Day Address, 2013*

Source: Hansen MT, "IDEO CEO Tim Brown," Chief Executive.net, January 2010; "The T-Shaped Graduate," *Campus Technology*, Dec. 2009; "Bolder by Design: Strategic Framework for Advancing Michigan State University," February 2013; EAB interviews and analysis.

# A Little Tech Goes a Long Way

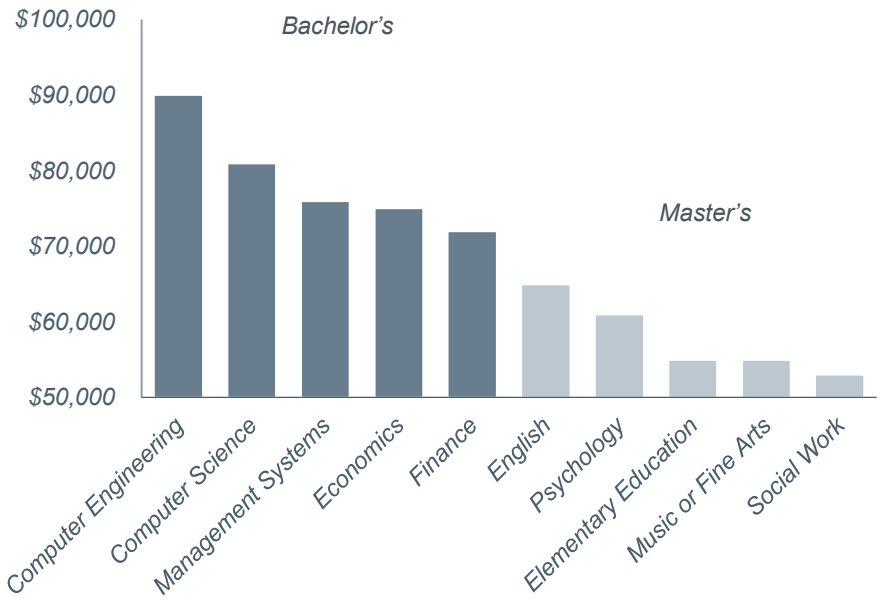
Bachelor's degree holders in search of better-paying jobs commonly pursue graduate degree in their initial field of study. However, research from the Georgetown Center on Education and the Workforce suggests these students may be better off pursuing a lesser credential in a higher-demand field. The average worker with a bachelor's degree in a technical field such as computer science earns substantially more than one with a master's degree in English or the fine arts.

A worker with a bachelor's degree in the arts can dramatically improve his job options through short-term training in select high-demand technical skills. The table presented here draws on research published by the labor market analytics firm Burning Glass. From July 2012 to June 2013, there were about 955,000 entry-level jobs in the United States available to a worker with a Bachelor of Arts (B.A.) degree and no technical skills, and these jobs had an average starting salary of about $43,000. However, workers with programming skills in addition to a B.A. qualify for another 52,000 jobs, with an average starting salary of over $60,000. Other technical skills, such as data analysis and social media, similarly expanded the pool of available jobs while raising one's starting salary.

## Recent Graduates Benefit from Lesser Credentials in Hot Fields

### Field of Study Trumps Degree Level

*Average Salary by Major, Ages 30-54*




### Threshold Tech Skills Open Many Doors

*Entry-Level Jobs and Salaries, July 2012-June 2013*

| Required Skills | Entry-Level Postings | Average Salary |
|---|---|---|
| *Bachelor of Arts* | 954,996 | $42,731 |
| + *Programming* | + 52,822 | + $17,753 |
| + *Data Analysis* | + 136,757 | + $12,703 |
| + *Social Media* | + 399,357 | + $3,424 |

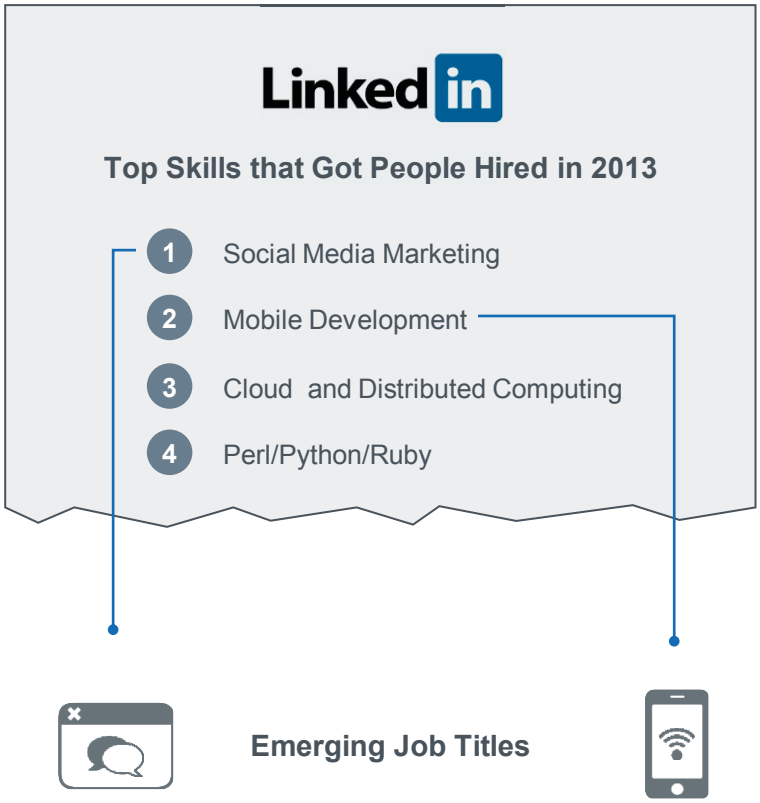
Source: "The Art of Employment: How Liberal Arts Graduates Can Improve Their Labor Market Prospects," Burning Glass Technologies, August 2013; Carnevale AP and Cheah B, "Hard Times 2013: College Majors, Unemployment and Earnings," Georgetown University Center on Education and the Workforce, May 2013; EAB interviews and analysis.

# Hot Skills in Search of Curriculum

Of all the skills job seekers could learn, two stand out as particularly promising: social media marketing and mobile application development. According to LinkedIn's analysis of 259 million member profiles, these two skills were the most likely to lead to new jobs in 2013, outranking other hot technical skills such as data mining (ranked #5) and web programming (ranked #13).

As companies continue to conduct a greater share of business online, diverse positions requiring social media and mobile development skills have emerged. Employers are seeking marketing specialists to produce social media content, cultivate online brands, and evaluate digital marketing campaigns. As more online traffic comes from handheld devices each year, employers are also hiring professionals able to program and design mobile applications.

## Social Media and Mobile Development in High Demand




- **Social Media Specialist:** Maintains and produces content for online platforms
- **Online Marketing Manager**: Develops online brand and customer engagement strategy
- **Digital Marketing Analyst:** Evaluates performance of integrated marketing campaigns
- **Mobile Developer**: Programs applications for iOS, Android, and other platforms
- **Mobile Architect**: Develops high-level systems to support mobile site
- **Mobile Designer**: Designs visual interfaces to optimize user experience

Source: Murthy S, "The 25 Hottest Skills That Got People Hired in 2013," LinkedIn, Dec. 2013; Burning Glass Labor/Insight; EAB interviews and analysis.

# Ideal for Post-baccalaureate Career Starters

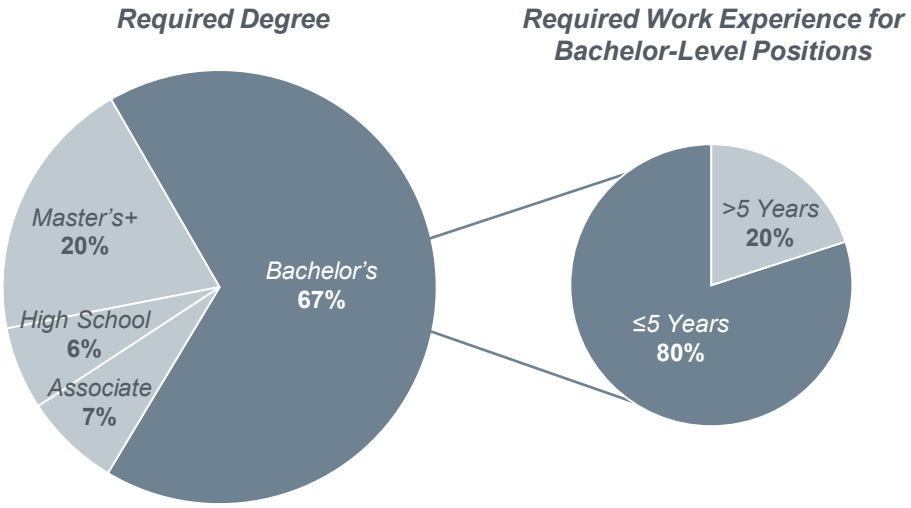
Social media and mobile development skills are not only in high demand but also well suited for career starters. Many of these students, who came of age as the Internet gained popularity, are "digital natives" for whom social networks and smartphones are familiar ways of life.

Moreover, jobs that require social media and mobile development skills target workers with bachelor's degrees and modest work experience. According to our analysis of job postings using the Burning Glass Labor/Insight tool, 67% of all social media jobs require bachelor's degrees. Of these bachelor-level postings, 80% require no more than five years of work experience. Mobile development jobs follow a similar pattern, with 74% of job postings requesting a bachelor's degree and 77% of bachelor-level jobs requiring no more than five years of work experience.

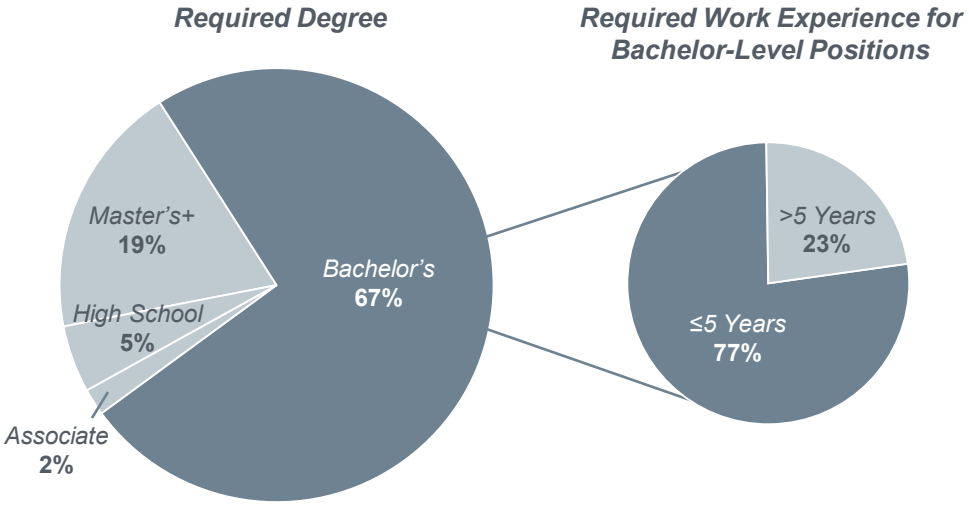
Post-baccalaureate career starters have the appropriate education and experience for social media and mobile development positions. With the addition of select technical skills, a recent liberal arts graduate running from underemployment could qualify for a well-paying job in these fields.

## Social and Mobile Jobs Tend to Require a Bachelor's and Modest Work Experience

### Social Media Job Qualifications




### Mobile Development Job Qualifications




1) Social media: n=390,272 job postings, with 167,047 postings unspecified by degree level and/or work experience.
2) Mobile development: n=38,013 job postings, with 19,871 postings unspecified by degree level and/or work experience.

Source: Burning Glass Labor/Insight; EAB interviews and analysis.

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# Missing the Market?

Across the country, hundreds of thousands of students are enrolled in business, marketing, and technology certificates. Because most community colleges have already invested significant resources in these certificates, they can draw on the expertise of current faculty to teach emerging technical skills. Over the last five years, several forward-thinking colleges have built on existing marketing courses to launch certificates in social media. Other colleges have built on existing programming courses to launch certificates in mobile application development.

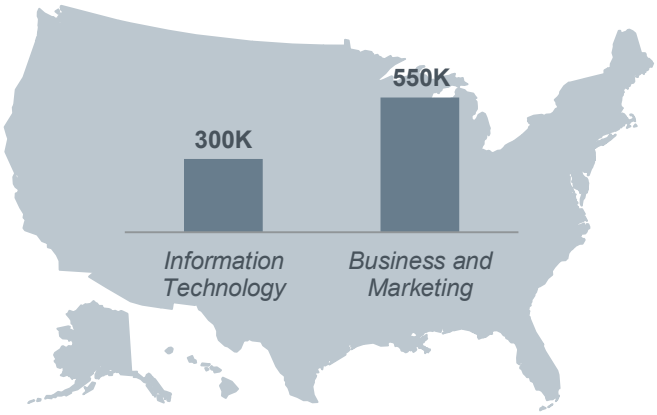
To date, however, few of these programs have attracted many post-baccalaureate career starters. Social media certificates often enroll students with limited exposure to Internet use. These student seek personal enrichment skills, including how to create online profiles and send messages to relatives. A course geared toward this audience lacks appeal to recent college graduates seeking fast-paced professional training.

Mobile development certificates face the opposite problem in attracting career starters. These certificates tend to enroll experienced IT workers who already have programming skills —an audience with which few recent liberal arts graduates can keep pace.

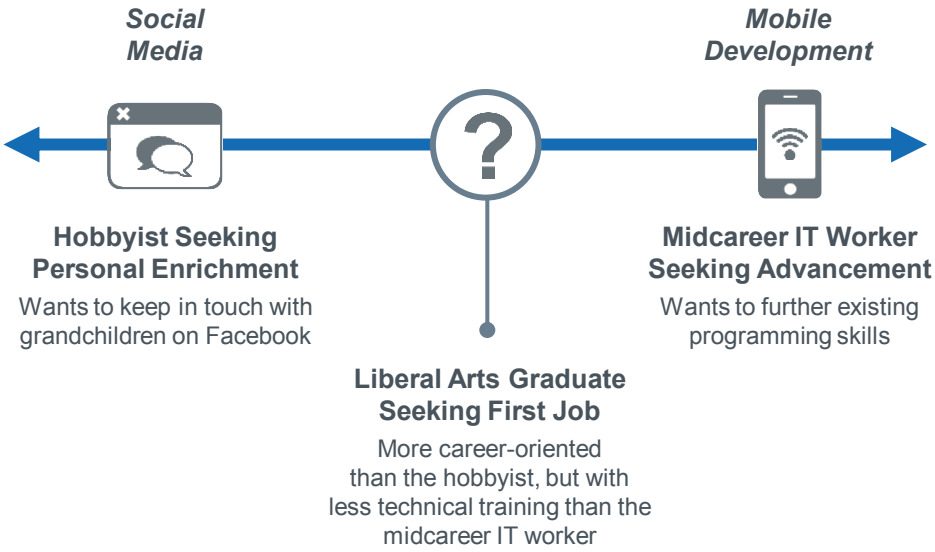
## Existing Social and Mobile Programs Rarely Appeal to Career Starters

**Sizable Certificate Conferrals in Hot Fields**

*Noncredit Certificate Seekers by Discipline, 2009*




**But Who Currently Enrolls?**




Source: "Community College Fact Sheet," American Association of Community Colleges, 2012; Carnevale AP, et al., "Certificates: Gateway to Gainful Employment and College Degrees," Georgetown Center for Education and the Workforce, June 2012; EAB interviews and analysis.

# Social Media for Career Starters

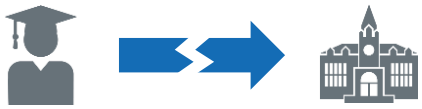
To appeal to the large audience of liberal arts graduates seeking their first career, social media and mobile development curricula must serve students with extensive digital literacy but little formal technical training. For social media programs, this means introducing minimum requirements for entry.

Currently, most community college social media programs have no prerequisites. Courses progress slowly and rarely cover more than the basics of platform usage to accommodate students new to social media. Career starters tend to avoid these courses, opting instead to enroll in social media programs hosted by university continuing education units or Massive Open Online Course (MOOC) providers.

In response, select community colleges have introduced prerequisites into their social media programs. A minor entry requirement (for example, an introductory social media course) can ensure that students are prepared for a fast-paced course that emphasizes advanced strategy over basic skills. These courses align better with the needs of post-baccalaureate career starters, most of whom use Facebook regularly but lack the knowledge to integrate it into a marketing campaign.

## Prerequisites Elevate Courses from Personal Enrichment to Business Strategy

### Enrichment Lacks Value to Career Starters



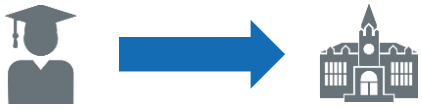
***Open Enrollment*** → ***Enrichment Focus*** → ***Better Off with a MOOC***

Courses progress slowly to accommodate students with limited digital literacy

Content skews toward basics of social media platform usage

Career starters see little value in a course without professional applications

### Prerequisites Allow for Rigorous Career Preparation



***Minor Prerequisites*** → ***Professional Focus*** → ***High-Value Certificate***

Entering students prepared for fast-paced, rigorous course

Content emphasizes advanced techniques and marketing strategy

Career starters see professional value in social media coursework

Source: EAB interviews and analysis.

# Building a Professional Portfolio

In 2010, Madison Area Technical College launched one of the first college-level social media certificates. Since then, this 12-credit program has enrolled post-baccalaureate career starters and mid-career marketing professionals, in addition to the occasional hobbyist. To ensure that the certificate teaches skills of professional value, instructors have segmented their classes into foundational courses open to all students and advanced electives open only to students who have mastered basic social media skills.

For example, to register for the advanced elective in Social Media Campaigns, students must pass the Social Media Principles course and get instructor permission. Once registered in the upper-level course, students not only learn advanced marketing techniques but also gain hands-on experience developing and implementing a social media campaign on behalf of a local business client. Previous clients have come from the hospitality, retail, and nonprofit sectors.

By emphasizing the professional applications of social media, this certificate has thrived since its launch, enrolling up to 125 students at a time. In response to its success, the college is now developing a digital marketing degree, which will include an internship in addition to the team-based Social Media Campaigns project.

## Madison College's Advanced Electives Offer Experiential Learning in Social Media

MADISON AREA TECHNICAL COLLEGE

**Social Media Certificate**

*12 credits, $1,600 tuition*

**3 Foundational Courses**

- Social Media Principles
- Web Design Strategies
- Social Media Writing

**1 Advanced Elective**

- Social Media Campaigns
- Mobile Marketing
- Social Media Ethics
- Digital Storytelling

**Course Prerequisites**

To register, students must pass Social Media Principles and get instructor permission

**Experiential Learning**

Students design and implement a multi-channel social media campaign on behalf of a business client

**Enrollment Success Inspires New Program Development**

125

Certificate enrollment in 2014, four years after program launch

New digital marketing degree slated for 2014

Source: "Social Media," Madison Area Technical College, Apr. 2013; EAB interviews and analysis.

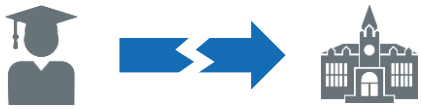
# Mobile Development for Career Starters

Currently, most mobile development programs target midcareer programmers eager to learn skills introduced after they initially earned their degrees. Though this audience has the ideal level of academic preparation, it is limited in size. By the time a program enrolls its third or fourth cohort, it may have exhausted the local pool of experienced programmers interested in learning mobile development.

To broaden their audience, forward-thinking program directors have created on-ramps for students with no prior programming experience to enter mobile development programs. By allowing students to take an introductory programming course before launching into mobile development, a certificate can accommodate recent liberal arts graduates seeking technical training for the first time.

## Introductory Programming Courses Provide On-Ramps for Liberal Arts Graduates

### Advanced Coursework Inaccessible to Coding Novices



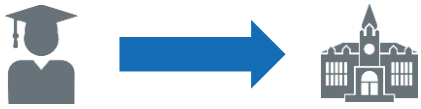
***No Intro Available*** → ***Constrained Audience*** → ***In Need of a Boot Camp***

First course in sequence assumes prior knowledge of web development

Non-programmers discouraged from enrolling in certificate

Liberal arts graduates seek options to boost skills elsewhere

### Optional "Bridges" Accommodate Diverse Backgrounds



***Bridge Course Offered*** → ***Broader Audience*** → ***Open Access Certificate***

Programming principles course available for those without tech background

Non-programmers take intro course; experienced programmers skip it

Liberal arts graduates feel comfortable enrolling in technical certificate

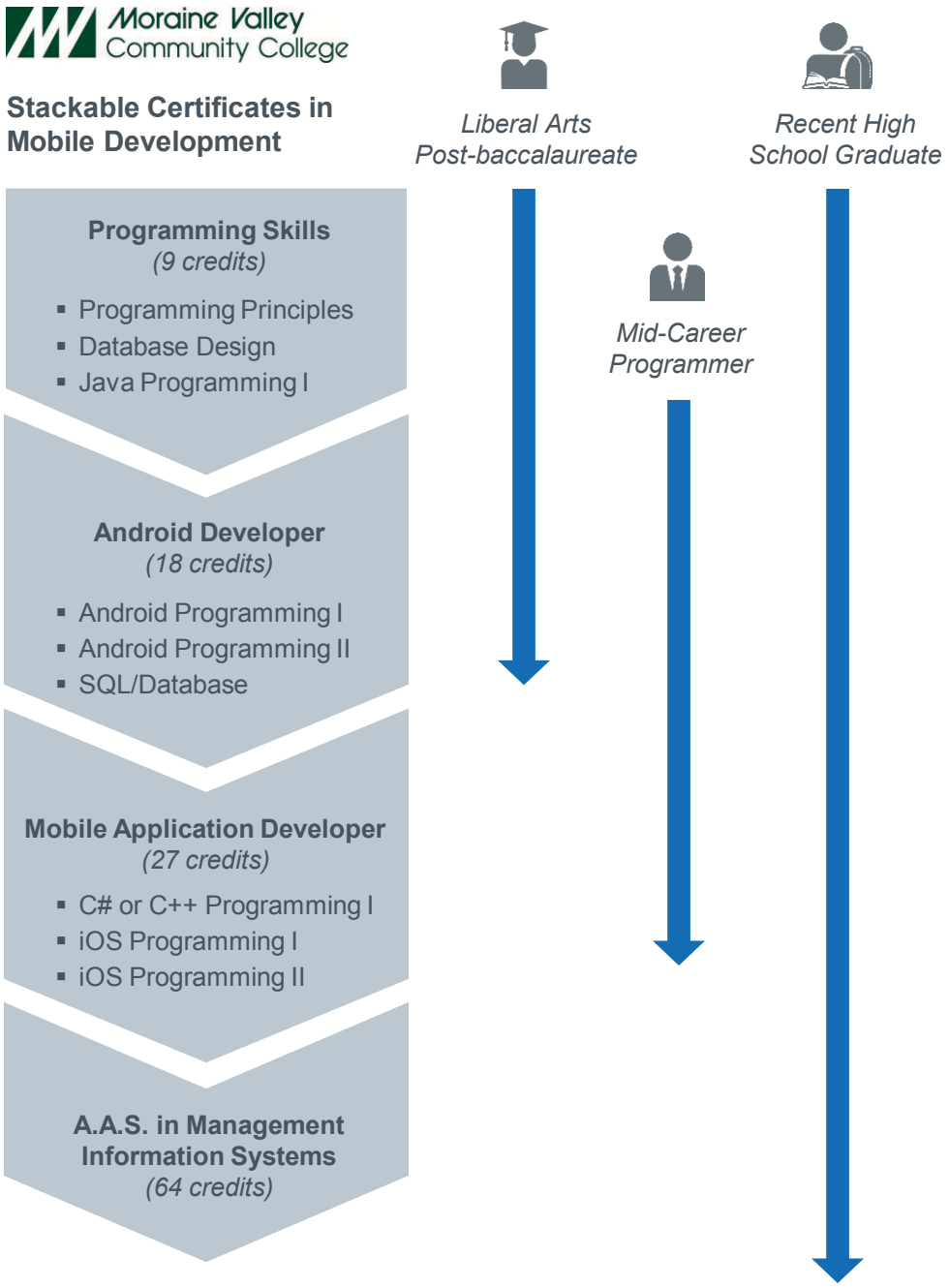
Source: EAB interviews and analysis.

# On-Ramps and Off-Ramps

In 2012, Moraine Valley Community College launched a series of stackable certificates in mobile development to accommodate both new and experienced programmers. A liberal arts graduate with no technical experience can start with an introductory Programming Skills certificate, which assumes no formal technical training. Meanwhile, mid-career technical professionals who have already mastered at least one programming language may enroll directly in an advanced certificate in Android or iOS development. The graphic presented here outlines the curriculum within the Android track.

By providing multiple points of entry and exit, this stackable sequence appeals to students across career stages and with varying levels of technical background, creating a diverse and robust enrollment pipeline.

## Moraine Valley's Stackable Certificates Accommodate New and Experienced Programmers




Source: "Information Management Systems —MIS & CSC," Moraine Valley Community College; EAB interviews and analysis.

# Keeping Up with a Moving Target

"Hot" programs such as social media and mobile development may take off quickly, but they require continuous upkeep to remain cutting-edge. The value of these programs depends on the timeliness of the content, and both fields are fast-changing. Faculty consider keeping up with new social media platforms and mobile technologies among their greatest challenges, and they commonly struggle to find up-to-date textbooks and develop lasting learning outcomes.

The most successful courses balance cutting-edge techniques (which may be short-lived) with foundational concepts in marketing strategy and programming principles. Students who learn how to implement a multi-channel marketing campaign can apply these lessons throughout their careers, regardless of which platforms are popular at the time.

To accommodate frequent updates to the curriculum, some colleges have launched noncredit programs in social media and mobile development that target a self-pay audience. These programs tend to have faster approval processes and more flexible revision processes than for-credit counterparts.

## Programs Require Vigilant Upkeep to Stay Cutting-Edge

### A New Platform Each Semester

"When I first started teaching social media principles, we didn't have Pinterest. The next semester, we had to add a whole unit on it. Now we're seeing the same thing happen with Vine."

*Social Media Instructor, Midwest Community College*

### …And New Regulations Daily

"Facebook is constantly revamping its privacy policy. I can't tell you how many times I've had to adjust my lesson plans while walking to an 11a.m. class because something has changed since I woke up."

*Social Media Instructor, Midwest Community College*

### Accommodating an Ever-Changing Curriculum

| *Common Challenges* | *Proposed Responses* |
|---|---|
| **Textbook Out of Date**<br>Faculty struggle to find (and can rarely reuse) textbooks that reflect current digital landscape | **Maintain a Class Wiki**<br>Faculty and students can share responsibility for adding recent news articles and case studies |
| **Learning Outcomes Short-Lived**<br>Faculty must manage a constant influx of new practices and platforms, introducing new content each term | **Focus on Foundational Concepts**<br>Social media is couched in marketing strategy and mobile development in programming principles |
| **Curriculum Updates Burdensome**<br>Introducing new coursework requires complex approval processes | **Consider a Noncredit Program**<br>Program approval and revision processes are more flexible |

Source: EAB interviews and analysis.

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# Assessing the Opportunity

## Where Can Our Institution Grow Programs in Social Media and Mobile Applications?

### Identifying Resources for Program Launch

1. Could we build on existing marketing coursework to launch a social media certificate?

   Yes ___ No___

2. Could we build on existing programming coursework to launch a mobile application development certificate?

   Yes ___ No___

3. Do we have the infrastructure to support experiential learning opportunities for career starters?

   Yes ___ No__

4. Could we incentivize faculty to maintain a cutting-edge curriculum that requires frequent updates?

   Yes ___ No___

*If you answered "yes" to two or more of these questions, please continue to the section below.*

### Generating Ideas for Program Design and Marketing

1. Does our local workforce include underemployed college graduates in need of technical skills?

   Yes ___ No___ *If "yes," see page 8.*

2. Could we introduce modest prerequisites to enrichment courses to increase their value to career starters?

   Yes ___ No___ *If "yes," see page 15.*

3. Would any local businesses serve as pro bono clients for our social media or mobile development students?

   Yes ___ No___ *If "yes," see page 16.*

4. Could we use introductory courses to open technical certificates to students with liberal arts backgrounds?

   Yes ___ No___ *If "yes," see page 17.*

5. Could we design stackable programming certificates that accommodate students of varying career stages?

   Yes ___ No___ *If "yes," see page 18.*