



Microcredentials:

Connecting Business Schools and Business Through Lifelong Learning

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Introduction

As business schools strive to be hubs of lifelong learning, AACSB encourages schools to think innovatively about the types of learning experiences and resulting credentials they offer. Demand for continued skill development and relevancy should shape the various modes of delivery and program formats that schools make available to learners throughout their career lifecycles.

In 2018, in response to recommendations by its board of directors and Business Practices Council, AACSB published an industry brief on *Lifelong Learning and Talent Management*, which highlights opportunities for business schools to proactively create learning experiences for an individual's career lifetime. One of the report's recommendations is for schools to better embrace technological advancements that allow for greater innovation in learning delivery, including "shorter, more flexible programs that could result in badges Badges, or other credentials, could form a link in a chain of stackable credentials." ¹ Further, the report signals the need for learners to be able to better manage their skills and competencies—for example, in the form of a digital portfolio that shows their mastery of acquired skills—and to receive more guidance in achieving their professional goals.

As the impacts of COVID-19 seem only to have accelerated calls for change in educational delivery and consumption, with increased demand for flexible, affordable, and career-focused learning experiences, we can anticipate that microcredentials will play a stronger role as complements to, and in some cases primary vehicles for, individuals' lifelong learning paths. In the spirit of embracing innovation, agility, and forward thinking, AACSB created its 2020 business accreditation standards for a future that will experience "a proliferation both in the type of consumers of higher education and in the learning models and technology that will facilitate and support learning." The reimagined standards also

support a "wide variety of learners of all ages" who will pursue learning through numerous modalities and locations—some of whom "will seek degree credentials, while others will seek micro-learning credentials."²

Degree and non-degree education both serve a purpose in the pursuit of quality lifelong learning, and AACSB encourages business schools to find opportunities for the two to coexist in meaningful ways. Accordingly, the recent standards promote flexibility for schools to accommodate multiple types of learners and the different learning models they will require, while upholding the highest level in quality and assurance of learning outcomes.

This briefing paper is intended to provide a high-level overview of microcredentials, their place within the lifelong learning and business education ecosystem, and the opportunities they can unleash for business schools in creating deeper connections with business.

We hope that business schools come away from this brief excited to embrace this growing world of educational delivery and competency credentialing. We are optimistic that schools will be eager to connect with business partners, industry leaders, and technology providers to create learning experiences that answer the needs of prospective learners and business school stakeholders. In upholding its mission to foster engagement, accelerate innovation, and amplify impact in business education, AACSB supports business schools in their continuous improvement so they can develop graduates and future business leaders who will thrive and create positive societal impact.

Key Themes

The world of microcredentials is large and diverse, challenging business schools, business, and other educational providers to think differently and innovatively about skill development opportunities for individuals throughout their lifelong learning journeys.

As outlined in AACSB's 2020 business accreditation standards, and as evidenced by many business schools, microcredential learning opportunities can result in academic credit that "stacks" into degree-based learning. This type of **bundling provides** increased access and flexibility to a wider audience of learners, who can build specific skills that support their career paths and potentially culminate in a degree later on.

Microcredentials do not eliminate the need for degree programs, which continue to generate long-term value. Instead, they augment those degrees by providing faster and more accessible learning options, which can contribute to a degree.

The half-life of skills continues to decrease, and employers face upskilling needs at an accelerated rate. Organizations are increasingly including microcredentials in their skill development strategies—either designed and delivered in-house to meet specific company or industry needs, or through partnerships with business schools or ed tech platforms—and this growing interest presents ar opportunity for business schools to play a larger role.

For business schools to remain relevant within the lifelong learning space, they must embrace innovation in learning delivery, including leveraging microcredentials. Subsequently, **business schools will need to create new and/or stronger connections with business partners** as well as seek collaborative opportunities with their business school peers and across the institution.

Background and Terminology

Interest in alternative credentials and microcredentials is increasing, as reflected in media coverage of new ways companies, business schools, and other learning providers are addressing needs for new skill sets. At times, terminology is used interchangeably, and confusion about what the differentiators are persists within many groups. Although nuances exist across regions and contexts, this section aims to provide an overview of this topic, including common terminology and how it is being used across organizations.

As employers continue to face new talent and skill set needs, AACSB expects to see a proliferation both in the types of higher education consumers and in the learning models and technology that will facilitate and support learning.

There will be a wide variety of learners of all ages, participating in the educational experience through several modalities of learning as well as locations. Depending on individual needs and expectations, some learners will seek degree credentials, others will seek microlearning credentials, and increasingly we may expect most learners pursuing both degreed credentials and non-degreed (including microcredentials) in tandem.



Microcredentials

In AACSB's 2020 business accreditation standards, microcredentials are defined as certifications granted by assessed mastery of a specialized competency. Such credentials may sometimes be "stackable," or combined to collectively satisfy

the requirements of a degree program. Minors, certificates, and badges are common microlearning credentials.³

Looking across regions, the specific interpretation of what constitutes microcredentials may vary, but is generally similar.

United States: According to a working paper published by the Organization for Economic Cooperation and Development (OECD), microcredentials in the United States are understood as learning activity consisting of "more than a single course but less than a full degree."

Europe: In the European Higher Education Area (EHEA), microcredentials are defined as "smaller units of learning, developed in response to evolving professional and societal needs that build on the already existing modular learning provision in institutions, by offering short stand-alone courses, targeted to all types of learners."⁵

Oceania: The New Zealand Qualifications Authority (NZQA) uses a somewhat broader definition, describing a microcredential as certified achievement of a coherent set of skills and knowledge that is smaller than a qualification and focuses on skill development opportunities not currently offered in the regulated tertiary education system. NZQA specifies that microcredentials must carry a minimum of five and up to 40 credits.⁶



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Stacking (or Stackable) Microcredentials

Microcredentials can be combined,

or stacked, to indicate a broad base of knowledge. The U.S. Department of Labor defines a stackable credential as "part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications and help them to move along a career pathway or up a career ladder to different and potentially higherpaying jobs." As such, an individual can acquire several of these types of credentials to present a body of knowledge that is more holistic than what a single credential could detail on its own.

In a conventional degree program, a learner completes a variety of courses that culminate in a degree, representing the array of skills this learner has accumulated. A more modern version may be complemented with stackable credentials, where an individual might obtain a series of microcredentials (through one or several different providers) and package them together as a portfolio representing their achievements.

Marriott School of Management, Brigham Young University

Brigham Young University (BYU) has developed the BYU Pathways system through which learners can "build their own degree." Made available to learners is a list of certificates with a variety of topic areas, including business, technology, communication, health, family, and professional studies. Upon attaining a certain number of these certificates that grant degree credit, as well as some additional general education and elective courses, learners can stack credits into an associate's degree. Upon achieving the associate's degree, along with additional advanced certifications, learners can build a full bachelor's degree.

BYU Pathways currently features 14 business-oriented certificate options, which stack to create an Associate of Applied Science in applied business management, and ultimately the Bachelor of Science in applied business management. Learners can take a certificate on its own or stack multiple certificates together to build a more advanced degree option. Recognizing that, with greater customization options come potential pitfalls for learners (such as choosing different certificates that may not have much synergy together), BYU Pathways offers recommended degree plans outline the options they believe will lead to the best job opportunities.

The Open University Business School, The Open University

The Open University, by way of its partially owned FutureLearn online content provider, offers microcredentials for business education coursework at both the undergraduate and the graduate levels. These credentials are stackable and provide credit toward the attainment of a degree later on.

For example, at the undergraduate level, the school offers an online microcredential for Business Management: Marketing Principles and Practice. 11 This program takes 10 weeks to complete, and learners obtain credit for completion upon passing a final assessment. When this final assessment is passed, students receive 10 U.K credits' credits at the undergraduate level from The Open University. Similarly, at the-graduate level, the school offers a microcredential in Agile Leadership and Management. After 12 weeks of coursework and successful completion of a final assessment, students receive 15 U.K. credits at the graduate level from The Open University. Both microcredentials can be taken by learners outside of the university and later applied toward a degree program.

W.P. Carey School of Business, Arizona State University

Arizona State University and its W.P. Carey School of Business has been an early leader in the microcredential space. Through the school's various professional certificate programs, learners earn credit that can be applied toward Carev's dearee programs. Two notable examples include the school's Professional Credential in Data Analytics and its Professional Credential in Tech Consulting—both delivered fully online by Carey faculty. The former was developed in response to a skills gap in the increasingly sought-after field of data analytics and is taken directly from the school's online Master of Science in business analytics (MS-BA) program. Learners can complete the credential program for no credit, as part of the continuing and professional education program, or they can apply the credential toward a future online MS-BA degree, accounting for nine of the 30 required credit hours.

The Professional Credential in Tech Consulting was launched in 2020 with the objective of helping "students upskill while continuing to work and gain a professional certificate right away." The online credential program spans 17 weeks and includes three courses—Enterprise Systems, Business Process and Workflow Analysis, and IT Services & Project Management designed to prepare learners in industries such as financial services, healthcare, marketing, and technology. As with the Professional Credential in Data Analytics, students who complete the tech consulting program with a cumulative score of 80 percent or above can apply nine credit hours toward the 30 credits for the online Master of Science in information systems management program at the Carey School of Business.1

What Can We Expect for the Future of Stackable Credentials?

Microcredentials are often used to supplement a traditional degree program. An individual can obtain a degree and then pursue different microcredentials throughout their professional career to continue

upskilling—for instance, with emerging technologies—allowing them to remain competitive in the workforce. However, the idea of a fully unbundled education could become more mainstream, as individuals seek to first pursue a series of microcredentials to gain a better understanding of specialties within their interests, and then potentially complete a degree program.

While we do not know what the future will hold, we can look at other industries where consumer choice has become pronounced and unbundling has occurred. One example is television. Not long ago, television was predominantly consumed through a cable subscription, which included a predetermined number of channels and

programming for a set price. The popularization of streaming services, like Netflix, has since allowed individuals to choose their channels through direct subscriptions to their preferred providers. Similarly, the music industry saw an evolution of consumption from albums, to individual song purchases, and now to a subscription model.

Could the future for higher education be similar, with individuals opting for an à la carte approach rather than one determined by a single education provider?

And if so, what would be the consequences of that change?

Current degree programs are crafted to provide learners with the skills they will need to be successful in the workplace and are backed by assurance of learning. Individuals choosing their own credentialing without such guidance could miss out on critical components of their education, lacking the knowledge to know what it is they need to know. These are questions business schools are considering within their degree and non-degree program portfolios.



"Modularity and 'stackability' is intentionally designed into the curriculum of the business school's programs allowing the various microcredentials to be offered through its corporate partnerships and other continued learning experiences to be then later stacked across the school's degree learning

options. Our flexibility to bundle

acquired microcredentials into

and also unbundle degree

development."

programs into microlearning

options, is an important aspect

across all Northeastern program

credit bearing degree programs,

- Arshad Saiyed, Associate Vice President of Digital Learning and Corporate Partnerships, Northeastern University



Academic Certificates

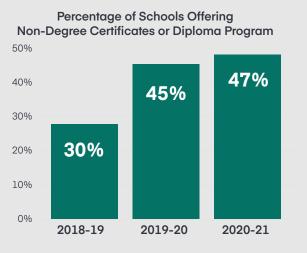
An academic certificate is a tangible non-degree

credential (or microcredential) certifying that a learner has completed a learning objective, or several. These certificates are highly varied in their scope and manner for assessing assurance of learning.

AACSB defines certificates offered by business schools as any official business program resulting in a credential that is not equivalent to a degree. Certificates can be offered at any academic level, such as undergraduate, graduate, or entirely independent from a degree program.

There is also the digital certificate, which is simply a certificate as stated above that is delivered and/or awarded at least partially, but often entirely, online.

The percentage of AACSB business schools offering non-degree certificates or diploma programs over the last three years has grown to nearly 50 percent, a 20 percent difference over three years. This does not factor in the many providers of business-related certificates outside of business schools, such as businesses and other third parties. Subsequently, this field is larger than these figures appear here, but business schools are certainly involved in this space. Digital badges, digital certificates, and other non-degree offerings are commonly discussed as potential alternatives for lifelong learners who may not be seeking a traditional degree, and it seems that business schools are addressing this growing demand.



Source: AACSB Business School Questionnaire and BSQ Programs Module (2018-19 to 2020-21) N = 282 AACSB business schools



Professional Certifications and Licenses

Unlike an academic certificate,

a professional certification is awarded by professional bodies, industries, or product vendors, typically following completion of an examination. In many cases, these certifications enable an individual to perform certain functions within the boundaries established by the professional industry. Some examples of this type of certification include the Certified Public Accountant (CPA) title¹⁷ or the Chartered Accountant (CA) title¹⁸, which are certifications used for accounting purposes, and the FINRA qualifications, which, within the U.S., certify that security professionals are competent in various financial compliance and legal matters.¹⁹



Digital Badges

Badges are a vehicle for displaying learned skills or achievements, whether through a

degree program, a certificate, a minor, or some other experience. Learners often "share" or display their badges to demonstrate that they've gained a particular competency. More and more, digital badges, which represent an assessment and credentialing mechanism, are being housed and managed online. There is growing acceptance, particularly among employers, of the digital badge, when acquired from a reputable purveyor, as a legitimate means of validating learning for a specific skill.

Open Badge Standard

Many of these badges follow a certain standard referred to as the "open badge standard." IMS Global Learning Consortium, an ed tech certification group, describes the open badge standard as a method for packaging information about accomplishments and embedding it into portable image files. Numerous elements contribute to a badge that abides by the open badge standard's parameters. At its core, badges adhering to this standard are digital pictograms that contain a metadata description (which is accessible to those who want to view it) outlining information about the achievement. Some of the information housed within the metadata includes the date that the badge was issued, the badge's issuer (such as contact information for the provider), the name of the badge holder, and a brief a description of the learning outcome achieved.



Academic Minors

Academic minors are typically granted to learners

as part of a traditional degree. They include a set of coursework on a given subject that is separate from, or complementary to, the major. For learners, these minors can provide a point of differentiation from their peers, or simply give them a more nuanced understanding of an area of study. While academic minors have been a part of the traditional degree structure for many years, they also can have a similar function to newer forms of credentialing, as they provide the learner with a more customized educational profile.

Platforms

Credly 21

Since 2013, Credly has been issuing digital credentials through partnerships with organizations focused on recognizing individuals' skills, capabilities, and achievements. Credly has issued more than 40 million digital credentials to date and works with employers, higher education institutions, training providers, and talent directories/job boards to create and design badges for specific needs. The platform maps metadata, including information on unique skill sets tied to each badge, and tracks brand awareness metrics connected to the credential issuer every time the badge is shared across digital networks and websites. Credly helps translate learner outcomes into a common language between employers and prospective employees, boosting graduate resumes and opening doors to careers through a talent directory that connects skill sets to recruiters.

BadgeCert²²

BadgeCert is a digital badge platform founded in 2013 that partners with organizations including universities, corporations, nonprofits, and associations to deliver over one million digital credentials in more than 100 countries. BadgeCert issuers are able to control badge expiration rules (e.g., to prevent earners from sharing expired or revoked badges) and stackable credential pathways toward skill mastery, have access to real-time data tied with badges, customize language for international markets, and integrate their LMS and CRM through BadgeCert APIs. As with other digital badge providers, the BadgeCert platform enables its earners to maintain a digital record of achievements and share them across social media networks, on career sites, in online resumes, and with recruiters

Smart Certificate²³

The Smart Certificate platform was developed by an international team of tech entrepreneurs. It grants institutions the tools needed to securely create, manage, and deliver credentials digitally. Smart Certificates was conceived to address the mismatch employers often see between candidates and the qualifications they listed on their resumes.²⁴ In addition to creating more trust between candidates and employers, Smart Certificate aims to become a marketing tool for the granting institutions while also providing recipients with secure digital

versions of credentials that can be shared with recruiters and across their social media networks.

VerifyEd²⁵

VerifyEd is a relatively new digital credential platform, established in 2019, that issues trusted, tamperproof digital educational and professional certificates. Having worked with organizations such as the World Bank, FutureLearn, and IBM, VerifyEd ensures trust in digital credentials through the use of blockchain technology, which prevents editing of or tampering with data tied to the credential.

Business Schools

Kelley Executive Education Digital Badge Program²⁶

Over a period of 10 weeks, and through a combination of synchronous and asynchronous work, learners at Indiana University's Kelley School of Business's Executive Education Digital Badge Program can obtain a digital badge showing their mastery in the subjects of predictive analytics or global cybersecurity. Participants who complete the program can show evidence of their acquired skills and competencies by displaying their badges on their digital resumes and social media profiles. The badge is also stackable in that recipients can apply it toward one of several executive degree program certificates (after passing an assurance of learning exam), which can then be applied toward an online executive MS or MBA degree program.

Deakin Business School, Deakin University ²⁷

Deakin Business School in
Australia has implemented its own
form of microcredentialing, called
Deakin Hallmarks. The program is
positioned as a recognition award
in the form of a digital badge for
outstanding student achievement
along one of the school's seven
key employability capabilities.
Each Hallmark is created and
assessed at a program or
discipline specialization level and
demonstrates the recipients'
employability skills in a
professional context.

Deakin faculty collaborate with industry partners to identify a specific employability skill that a Hallmark will feature and to shape its design and assessment, including criteria, standards of achievement, and the time frame for assessment. A panel of Deakin faculty and the industry partner(s) jointly assess student achievement. The Deakin Hallmark is awarded

as a digital badge that bears the insignia of Deakin University; the icon, name, description, and criteria of the capability learned; the assessment panel; and the learner's submission. The Hallmark may also include the name of the industry partner. Deakin Hallmarks can be shared across social media platforms and are recorded on the learner's academic transcript.

Kennesaw State University Digital Badges

Since 2016, Kennesaw State University has been building its digital badge programming with support from the Coles College of Business that can help learners show their interest in upskilling and reskilling—often when combined with a traditional degree.28 Within the executive education space, Coles College offers digital badge programs in the subjects of Account Management, Fundamentals of Professional Selling, Business Innovation, Leadership Excellence, and Customer Centricity—all of which are designed for mobile learning and use best practices in gamification, microlearning, and on-the-job application.²⁹ Across the university, digital badges are used for professional development opportunities for faculty, as well as educational enrichment for learners. Notably, the KSU Digital Badge in Prior Learning Assessment is a self-paced and fully online badge program that helps faculty assess and evaluate students' accumulated learning for the purpose of granting college credit.³⁰

Initiatives

Europass

Developed by the European
Commission, Europass provides
online tools and information that
help individuals manage their
learning and qualifications and
more effectively apply those
competencies to furthering their
career prospects across Europe.³¹
Europass Digital Credentials are
expected to allow employers and
other institutions to better recognize
and understand skills achievement,
as well as increase security and
reduce administrative burden, due to
their paperless nature.

Presently, 18 countries are piloting the use of the digital credentials to test at a national level, and the European Commission is working to create tools, software, and services to support the EDCI.



The world of microcredentials is big and diverse, and it continues to evolve. Do you have examples of other types of microcredentials being used within your specific region or context, or do you know of additional terminology that we missed? Share with us at research@aacsb.edu.

Audience and Consumers

Throughout their careers, individuals will encounter numerous needs to supplement or enhance their skills and partake in professional development. Demonstrating attainment of such competencies becomes increasingly important in a competitive and quickly changing job market. Companies must create environments that promote lifelong learning in their strategic priorities, and business schools in their priorities must continually address the market's business and talent needs.

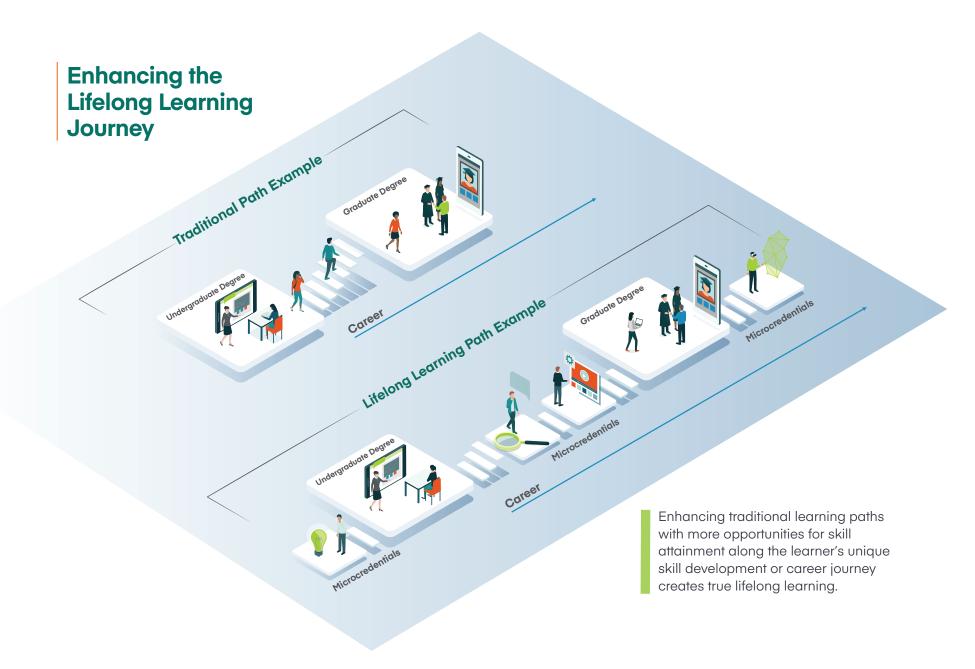
A World Economic Forum and PwC collaborative study, *Upskilling for Shared Prosperity*, calls for an "upskilling revolution" that would enable people around the world "to participate fully in the future of work, whatever that might be."³² One of the study's findings shows that wide-scale investment in upskilling has the potential to boost GDP by 6.5 trillion USD by 2030. It further states that the need for a global upskilling agenda has only been accelerated by impacts of COVID-19, as digitalization and automation are happening at a more rapid pace, and the demands, costs, and resources for successful upskilling are complex and contextual.

Education providers are called on to embrace "the future of work as a source of reinvention to normalize lifelong learning for all." This new normal includes curriculum that is co-developed with business and is "just in time" versus "just in case"; increased offerings

of "self-directed and nano-degrees for lifelong learning"; and greater global connections for skill recognition and educational partnerships.³³

In a March 2021 MBA Roundtable survey, 71 percent of respondents agreed or strongly agreed that alternative credentials are a required strategy for remaining competitive in graduate in management education, with 74 percent citing meeting market demand and 71 percent citing lifelong learning opportunities as drivers for offering alternative credentials.³⁴ Subsequently, microcredentials attract a growing number of prospective candidates as an efficient (both from a cost and time perspective) means of improving specific learner skill sets.

In light of organizational priorities for lifelong learning and the continuing "upskilling revolution," educators, talent development leaders, and learners themselves will need to evaluate the unique skill set needs along different points of an individual's career path, as well as the most effective delivery vehicles or learning experiences. Increasingly, learning experiences using microcredentials are being implemented even before an individual enters a career, for example, within the core learning experience of undergraduate study, and all the way to post-career learning.





Learner Stages Throughout Career

Core Undergraduate Learning

Before entering the workforce, an individual will typically aim to acquire a broad set of knowledge, skills, and abilities with an emphasis on business fundamentals. These include critical thinking, communication, and teamwork skills. Many educators and employers feel that learners should have exposure to a broad education, including subjects such as liberal arts and technology, in addition to business subjects, so they can develop skills that can be applied in a variety of contexts. This core learning should focus on both knowledge and skills, making experiential learning opportunities critical.

During this phase, learners might take additional coursework to supplement their formal education. This coursework could be a microcredential, which would give the learner an opportunity to hone a skill that may not be included in their chosen degree path. These credentials can provide learners with the specific skills employers are seeking in their new hires. Additionally, employers may appreciate a learner who goes beyond a degree program, showing their passion and ambition to complete a microcredential, such as a certificate, in addition to their general studies.



Early Career Learning It is critical for

individuals to have functional

job knowledge at the start of their careers so they can perform their day-to-day duties. Some jobs will allow candidates to gain working knowledge once hired, while others will require that the candidate pursue a specialized degree, certificate, or certification before starting work. In the latter case, individuals can pursue microcredentials to fill in gaps they have between the knowledge they gained in their degree programs and the knowledge and skills their jobs requires.



Team Leadership Learning

As individuals advance into

leadership roles in their careers, they will need to acquire further education in managing people and teams. This learning can occur through generalist master's, executive education, or corporate training programs. Increasingly,

however, individuals can pursue microcredentials focused on management and leadership topics to help develop these skills. Experiential learning opportunities, including simulations, have become more common, providing learners with a more applied understanding of leadership principles than ever before.



Organizational **Leadership Learning** Individuals who aspire

to lead organizations will need additional

learning to refresh and refine their leadership skills and broaden their knowledge to areas of an organization where they might have less experience. This education can occur in generalist master's, executive education, executive doctoral, or other formal or informal leadership development programs. Microcredentials can support individual learning in a specific organizational area, even if just at an introductory or principal level. Managing an organization can be quite different than managing a team or a department, and as such, obtaining credentials for

high-level management can provide leaders with a boost in confidence and experience at this career phase.

Career Change or Post-Career Learning



Throughout an individual's career, microcredentials offer a flexible, low-risk method for acquiring

new skills, whether they seek to become a hobbyist or to jumpstart a new career path altogether. COVID-19 has prompted some people to reskill, either due to unemployment hikes or impacts on the nature of work itself across several industries. Because most microcredentials have a low barrier to entry, career-changers can easily access learning opportunities that equip them with the necessary skills to obtain new employment. For individuals who desire career changes, pursuing microcredentials can help to aradually obtain skills while working in their current position, eventually preparing them to make a switch.



"Despite the significant acceleration and disruption brought forth by the information age, this is the slowest rate of change we are likely to experience. Those exiting secondary education today may expect to experience five or more distinct careers, in fields yet to be imagined, over a 60+ year working lifetime. A 60-year curriculum will require an exquisite mix of both (traditional) episodic and (emergent) continuous ambient learning with more tightly coupled experiential learning – doing cycles to empower learners to reach their highest aspirations."

- Corey Snow, Director, Education Cloud Industry Solutions, Integrations & Architecture at Salesforce



CONSIDER THIS: A Focus Across the Entire Career Spectrum

Many schools are already offering microcredential opportunities, especially within their continued and executive learning offerings. Although the scope of AACSB's accreditation (see Standard 5: Assurance of Learning) includes only microlearning credentials that can be stacked or combined into an AACSB-accredited degree program, as well as non-degree executive education that generates greater than 5 percent of a school's total annual resources, AACSB encourages schools to seek synergistic opportunities among their degree and nondegree programs to best serve market needs and provide value to the various types of learners business schools serve.

Business schools have an opportunity to expand their portfolio of specialized non-degree offerings to address the needs of learners at all career stages—from career beginning, to leadership roles, to career switches—through microcredentials. These offerings signal specific competencies that are backed by trusted institutions, are understood by future employers, and can be shared easily across an individual's network.



Employers Are More Accepting of Credentials Outside of Degrees

Over a decade ago, massive open online courses (MOOCs) entered the educational field, causing fear within the higher education industry that credentials and badges earned online through platforms such as Coursera or EdX would challenge or replace traditional degrees. Although MOOCs have

40% of workers will require reskilling of six of business leaders report that they expect employees to pick up new skills on the job

challenged institutions to better embrace opportunities that incorporate online education, they have not necessarily months or less and **94%** tarnished the value of the traditional degree. In most cases, employers still seek candidates with a traditional degree as an indicator of competency and the foundational knowledge needed for a specific role within a company.

> However, in recent years, some companies have sought alternatives to the university degree as the primary educational requirement for employment, largely in the tech industry but also across other industries including retail, hospitality, and finance.³⁵ A majority of employers also believe that "the need for continuous lifelong learning will demand higher levels of education and more credentials." as

reported in the 2018 study Educational Credentials Come of Age.³⁶ Of course, we can expect variation across industries and sectors in the needs and pace of upskilling efforts. For instance, job functions in IT, technologies, software, and programming are rapidly changing and well positioned to a microlearning approach where employees can learn and acquire credentials that signal their competencies in a more flexible and on-demand manner.

According to the World Economic Forum's Future of Jobs Report 2020, "On average, companies estimate that around 40% of workers will require reskilling of six months or less and 94% of business leaders report that they expect employees to pick up new skills on the job, a sharp uptake from 65% in 2018."37 Further, 66 percent of surveyed employers expect a return on investment in upskilling and reskilling efforts within one year. Shifts in the market, new skill set demands, and a focus on lifelong learning all are impacting change and innovation in education delivery—for both degree and non-degree learning—with a focus on offering more flexible delivery options, leveraging digital technology, and developing specific, even personalized, skills.

A recent article in *Chief Learning Officer* challenges the age-old concept of soft versus hard skills with a new model focusing on skill durability:

- Perishable skills (half-life of less than two and a half years): Tech skills related to vendors, platforms, programming languages, and organization-specific policies and tools.
- Semi-durable skills (half-life of two and a half to seven and a half years): Frameworks specific to certain fields, including technologies, processes, and tools that are likely to change with industry advances or shifts in business strategy or approach.
- Durable skills (half-life of more than seven and a half years): Teachable, tangible, and measurable skills, including project management, effective communication, and leadership, that are foundational to the effective development and implementation of semi-durable and perishable skills required of an organization.³⁸

According to this framework, the perishable and many semi-durable skills with shorter half-lives would be well-suited to microcredentialed learning, as individuals could make quick, nearly on-demand updates to their skills portfolios. However, development in durable skills is necessary for an organization's long-term success and the professional growth of its talent. Too much focus on short-term skill sets may help individuals remain relevant with current business processes or technologies, but it detracts attention from nurturing the foundational, less transactional skills needed to create companies that thrive in the long term. Ideally, traditional degrees and alternative credentials can coexist to complement each other's unique strengths for the short- and long-term success of an organization.

Microcredentials as 'Equalizers' to Societal Growth

Several organizations, initiatives, and platforms leveraging microcredentials are created to address employers' needs for certain skills. Increasingly, though, organizations recognize that one of the major factors keeping certain groups or communities from entering careers that allow for growth and prosperity is a lack of qualifications. For some, systemic barriers and resource constraints hinder their ability to access and complete traditional degree-based education, lowering their chances for recruitment by employers. Initiatives like OneTen and organizations like Guild (a B Corporation focused on upskilling) and the Lumina Foundation (which works to expand access to postsecondary learning) aim to rethink ways of unlocking opportunities for certain groups, either through a skills-first approach or through funding partnerships with microlearning and credentialing providers. Such collaborations enable employees to obtain skill

sets in a personalized and flexible way so they can reach their full professional potential and propel their careers to levels that otherwise might not have been possible.

A common driver among microcredential providers and initiatives is to help equalize opportunities for all individuals by removing barriers to financial, time, background, or other accessrelated obstacles, contributing to a more inclusive and diverse workforce. The growing cost of higher education in certain parts of the world is often cited as one of the catalysts for implementing microcredentials. However, in other parts of the world, where the government subsidizes higher education or where learners pay little or no tuition, microcredential programs may actually cost more than formal degree programs. Based on recent trends, we can expect more national movements or initiatives that focus on the societal benefits of investing in lifelong learning and skill development.



CONSIDER THIS: Equity in Access and Microcredentials

AACSB's 2020 business accreditation standards urge business schools to consider their societal impact in regard to the teaching, research, outreach, and services they provide. Would expanding educational access through new delivery methods help you achieve your societal impact goals? As the top providers of quality business education, AACSB-accredited schools are home to some of the leading educators and scholars that help create tomorrow's business leaders. How is your business school serving its community, perhaps through digitally leveraged non-degree offerings or alternative credentials, to help learners thrive in ways that perhaps were not previously possible or were only available to a select group of individuals?

Employers in many industries are changing their expectations for the skills their new hires should possess. Some organizations are shifting to a "skills-first" approach to hiring that opens their prospective talent pool to a wider group of candidates—some of whom otherwise would not have met the skills criteria for a position. In this approach, individuals develop essential skills throughout their careers in response to employer and market needs. By enabling greater access to job opportunities, employers are able to increase the diversity of their talent and help combat persistent hiring inequities among minority groups. Below are a couple of examples of initiatives that focus on a skills-first approach.

OneTen

In December 2020, a coalition of 37 founding executive of leading companies including Merck, Deloitte, Accenture, Nike, and dozens more launched OneTen to increase hiring and advancement opportunities for Black Americans. Over the next 10 years, the company aims to place one million Black individuals "into family-sustaining jobs with opportunities for advancement." OneTen specifically targets Black candidates who do not have four-year degrees but are in search of careers with advancement opportunities and greater economic mobility. The company connects employers with talent providers—local, regional, and national education and skill-building organizations that identify, upskill, and develop skills of diverse talent—as well as nonprofits and skill-credentialing organizations to cultivate "a comprehensive system that focuses on skills-first." OneTen, in collaboration with employers and education and upskilling partners, designs educational and employment pathways to directly support the unique needs of the individuals they serve.

"New Collar" Jobs

IBM uses the terminology "New Collar" to describe job roles that "prioritize capabilities over a traditional degree" and rely on a mix of in-demand skills, as seen in the technology industry. Through its New Collar Certificate Program, candidates take a free assessment to be matched with potential careers in IT that fit their natural skills and abilities and, upon certificate completion, are provided access to employer match opportunities based on their newly acquired skills. ⁴¹

Open Skills Network

Open Skills Network (OSN) is a "coalition of employers, education providers, military, and other stakeholders dedicated to advancing skills-based education and hiring" with a focus on in-demand skill development. ⁴² OSN recognizes that one of the main challenges employers and educational institutions face in switching to a skills-based approach is being able to effectively and efficiently access skills data. The challenge is compounded by the need to keep up with skill set needs in an ever-changing and dynamic labor market. Through the creation of an open skills infrastructure, OSN aims to promote a more equitable skills-driven labor market that matches learners and workers with skills-based education and career opportunities in a more rapid and seamless way, in addition to enhancing talent pipelines to all individuals to achieve their career goals.

NATIONAL MOVEMENTS IN UPSKILLING AND LIFELONG LEARNING

Within certain countries and regions, government bodies are setting forth strategic movements that allow their citizens to continuously upskill and maintain career readiness.

SkillsFuture (Singapore)

SkillsFuture is a national lifelong learning movement in Singapore that, since 2015, has been providing all Singaporeans skill mastery opportunities throughout their individual lifecycles, from school years, to early career, to mid-career, to post-career. The Future Economy Council drives the SkillsFuture initiatives, partnering with educational and training institutions, industry, government, and unions to create skill development opportunities.

Since January 2016, Singaporeans aged 25 and older receive a SkillsFuture credit of 500 SGD that does not expire and may be used for MySkillsFuture eligible courses.

Educational institutions, including business schools like Singapore Management University with its SMU Academy, offer courses and programs for working professionals who can apply their SkillsFuture credit to attend. SMU Academy also offers credit-bearing modules that can stack into part-time degrees at the undergraduate and graduate levels and issues its own set of digital credentials or badges (that run on blockchain) for completion of courses with professional accreditation or assessment.⁴³

European Skills Agenda

The European Skills Agenda is a five-year plan set out by the European Commission that aims to develop more effective and applicable skills among individuals and business.

The European Skills Agenda recognizes recent shifts, brought on by digital transformation and heightened by impacts of COVID-19, to the way people work, learn, and engage in society and daily life. Through the agenda, the commission proposes a "European approach to micro-credentials": one that builds trust in such credentials, making them portable and recognized across the EU; that is supported and included in qualifications frameworks among national qualification authorities; that allows for learning to be "visible and understood"; and that is flexible for learners and allows them to "store and showcase to employers acquired micro-credentials through Europass and its Digital Credentials."44

The European Skills Agenda outlines specific metric goals it aims to achieve by 2025, which largely include increased participation by adults in learning experiences that allow for skill development.

Providers

Needs for skill development vary across organizations and from one individual to another. Many organizations, especially outside of academia, are recognizing the business opportunity in microcredentials to create platforms, experiences, and mechanisms that help meet the demand for skill development. For some organizations, like Credly mentioned earlier, this means creating the infrastructure to allow other organizations to streamline a new credentialing experience. Other providers, such as employers themselves, are choosing to bypass higher education institutions as the source for skill development, instead creating infrastructures and programs based on their unique needs.

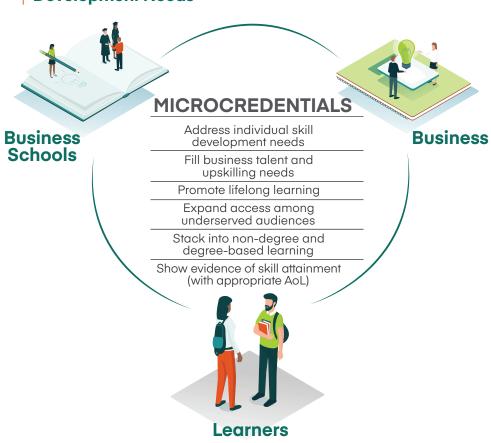


Corporate Activity

The technology sector has experienced some of the greatest advancements microcredential

acceptance and implementation, led by corporations including Google and IBM. For this industry, and others following a similar path, microcredentials have responded to a clear need for continuous and timely skill development, given the rapid pace of change in technologies over the past decade. As business processes and operations continue to rely on emerging digital technologies, we can expect, and in many cases are already seeing, a need for continuous skill development throughout an individual's career.

Microcredentials Address Business Schools and Their Stakeholder Skill Development Needs



Big name companies like IBM, Google, and Microsoft have the resources to justify the investments required to build their own employee skill development and credentialing infrastructure. While many large organizations partner with ed tech providers, use digital badge platforms, or even partner with business schools to create and deliver their training and skill development opportunities, they are still largely in charge of the learning types and content their employees can access.

IBM Digital Badge Program and Connected Credentials Program

In 2015, IBM introduced its IBM Digital Badge Program and has since awarded over three million digital badges to learners. IBM's badges enable individuals to progressively gain skills that lead to attainment of its other credentials. Among IBM's more than 200 unique credential programs, learners have access to a combined 2,500 digital badges that serve as a portable, sharable record of achievement.

Through the IBM Connected Credentials Program, the company outlines five primary credentialing categories, each of which recognizes different types and levels of achievement (from a specific skill to advanced-level certification) and results in digital badges. The badges provide individuals with a detailed record of their ongoing competency attainment.⁴⁵

Google Career Certificates

Google Career Certificates provide learners with credentials in the fields of IT Support, Data Analytics, Project Management, UX Design, and Android Development. Learners complete the certificates, which consist of a series of courses, through a subscription to the online learning platform Coursera. Google does not generate revenue from the Career Certificates program and provides need-based financial assistance. No experience is necessary for learners to enroll in the certificates, and they can complete the online courses at their own pace.

The certificates are designed and built by subject-matter experts and senior practitioners at Google and aim to provide learners with theoretical and practical knowledge needed for an entry-level jobs. Other industry organizations and platforms (for example, the Project Management Institute, Tableau, and Figma) are consulted in the course development process. Google has also created more than 130 partnerships with employers, including Deloitte, Infosys, Target, and others (in addition to Google, itself), that have committed to considering Google Career Certificate graduates for entry-level jobs.46

EY Badges

At EY, formerly Ernst & Young, lifelong learning plays an important role in the development of its employees. The company proudly displays the investments it has made in "futureproofing" its workforce. In fiscal year 2019 alone, the company invested more than 530 million USD in formal learning an average of 54 learning hours per person, and delivered 14 million learning hours to employees.47 Further, the company has launched EY Badges, using the Credly platform. These digital credentials focus largely on technologyoriented and leadership skills development, with topics including data visualization, data science, Al, transformational leadership. innovation, and inclusion and belonging, among others.48 As of February 2021, more than 100,000 EY Badaes were awarded across the EY workforce.49

EY Badges also play an important role in the EY Tech MBA program offered in association with Hult International Business School. The EY Tech MBA is a corporate, virtual MBA program, available at no cost to all EY employees around the world. Learners must complete 16 EY Badges, three pillar papers, and a final capstone project to earn the MBA.⁵⁰

Salesforce Trailhead

The Trailhead platform was developed by Salesforce to address an upskilling and cross-skilling need within the growing Salesforce ecosystem, where the expertise and talent were not keeping pace with the job growth and demand. Trailhead started out with credential programs, or badges, but has since grown to more than 1,000 microcredential offerings for skill development in areas beyond the Salesforce platform solutions, includina general business and offerinas with partners such as Amazon and universities. Through Trailhead, not only can individuals currently using Salesforce software upskill and earn credentials or badges to show their acquired skills, but individuals looking for a new career path with Salesforce can also learn Salesforce skills for free, earning credentials that can connect them to new opportunities with Salesforce through the Trailblazer Community.51 Further, companies that use the Salesforce platform can use Trailhead to purchase onboarding and upskilling experiences using their own content, creating learning pathwavs customized to their needs that can embed employee skill development opportunities into the business workflow.

New Providers for Addressing Skill Development Needs

Technological advancements over the past several years have also brought a new set of players within the lifelong learning and workforce skill development space. As shared in the examples throughout this brief, a multitude of platforms continue to come to market that provide a variety of services and products that are often customizable to a company's unique needs. Although some may view these new players as competitors to business schools, others recognize collaborative opportunities with business education that can lead to learning experiences most needed by employers and learners.

Platforms such as LinkedIn Learning offer a number of solutions for businesses, government agencies, and even higher education that enable connections between individuals' career and professional development goals and the skills they need to achieve those goals. Through partnerships with higher education, LinkedIn Learning allows faculty to use their own educational content in addition to more than 16,000 courses available through the platform, coupled with real-time skills insights and the ability to track student progress and career paths. ⁵² For companies, LinkedIn Learning provides scalable, customized skill development pathways that leverage the insights of global experts on various topics, delivered in an online and flexible format. ⁵³

Learning Supported by Degreed and Non-Degreed Offerings Conducive to Lifelong Learning

Foundational Learning

Largely supported through degreed undergraduate and MBA programs that create a broad foundation of knowledge among learners, preparing them for careers.

Specialized Learning

Largely supported through both degreed and non-degreed learning like microcredentials, as well as degreed specialized master's programs, that focus on specific skill-set development, allowing learners to advance through their careers and meet individual goals.



CONSIDER THIS: Preference for Customized and Personalized Learning Experiences

Over the past several years, there has been increased interest among educators, learners, and employers in personalized learning and educational experiences tailored to individuals' specific needs, versus a one size-fits-all approach. Companies that have the resources to offer in-house professional development opportunities often do so in order to customize learning experiences and objectives to the specific needs of the company and to fill industry skill gaps.

For example, in a study focusing on leadership development conducted by AACSB and the Society for Human Resource Management (SHRM), employer participants selected "in-house leadership mentoring/ executive coaching" and "in-house leadership development programs" as the top two most effective employee learning activities. Both business school and employer respondents shared through open response that some of their more successful leadership development opportunities were those in which a business school worked with an individual company to create a customized program for its employees, which allowed for more personalized learning experiences.⁵⁴

For years many business schools have been partnering with companies through customized learning options, particularly with higher-level executive employees, with whom a hands-on approach to very specific topics and unique learning objectives has been most valuable. For example, The Wharton School of the University of Pennsylvania offers its Wharton Custom Programs, which build on the concept of partnering with a company through the development of a customized program tailored to organizational needs. The partnership consists of a needs assessment along strategic objectives, evaluation of executive capabilities and development of a targeted curriculum; the design and delivery of the program; and measuring the impact of the program for long-term results. The program also builds in executive coaching and action learning projects on an individual and team level.⁵⁵

Although customization is a resource-intensive process, some features of customized programs can be applied to other learning experiences, especially through the use of technology. Microcredentials can serve as a useful way for learners to create a unique learning experience by selecting specific skills or competencies aligned with their professional needs or interests and building them into a personalized program. Further, if schools can develop programs that can be unbundled into several microcredentials that can later be bundled back into a degree program, learners gain the flexible learning process they increasingly desire and are able to meet their unique needs.



Collaborations and Partnerships: Cornerstones for Microcredential Delivery

A reoccurring theme among many of the examples of institutions and organizations offering microcredentials is that they require some level of collaboration—whether an organization uses a credentialing

"The online space has dramatically reduced the costs of collaboration between university partners. Once the delivery platform is aligned, as it is in the FOME Alliance, for example, it is relatively straightforward to combine the best of content from each partner in the form of microcredentials through which credits can be earned and applied to other programs at each partner school. This approach has huge growth potential outside the megaschools, allowing smaller schools to compete in the premium online space without needing full content coverage across all disciplines"

- Nick Barnville, Associate Dean of Degree Programs and Director of EdTech Lab, ESMT Berlin

platform to build the learning experiences needed, a school and company partner to create a skill-based curriculum, or business schools develop a consortium to leverage each other's strengths and resources. As co-creators of knowledge,56 business schools must continue to serve as conveners and partners with industry in creating learning experiences and knowledge dissemination, as well as find connections across the university and among business schools in order

to be timely and responsive to society's lifelong learning needs.

Business Schools and the Business Community

In the spirit of responding to timely business and community needs, many business schools partner with companies to develop microcredential learning opportunities that address a particular topic or skill set need among current and prospective employees.

Muma College of Business, Diversity, Equity and Inclusion in the Workplace Certificate

The Diversity, Equity and Inclusion Certificate offered by the University of South Florida's Muma College of Business is the result of "three power players" in the Tampa Bay community: the business school and its two sponsors, the Tampa Bay Lightning, a professional ice hockey team, and Jabil, a manufacturing services company. After identifying a need, or learning opportunity, in the business community, these three organizations came together to develop a free, seven-week certificate program aimed at helping business and community leaders learn ways to improve employee diversity and create business models that support equity and inclusion. Upon completing the program, a learner is awarded a digital certificate along with a Credly badge and 1.4 continuing education units (CEUs) from the university.57

Northeastern University Partnerships With ServiceNow and PwC

Through Northeastern University's Experiential Digital Global Education (EDGE) unit, the university and its academic units, including the D'Amore-McKim School of Business, engage in innovative collaborations across campus and with business partners to merge technology, business, and data analytics to prepare individuals for the future of work.

One notable example emerging from this work is the Data Scientist Degree Apprenticeship delivered jointly by Northeastern University and IT service management company ServiceNow, in the company's London location. To comply with the U.K.'s Apprenticeship Levy, which requires certain businesses to pay taxes dedicated to apprenticeship learning, ServiceNow partnered with the university to create a three-year hybrid curriculum resulting in a BSc (Hons) in Data Science issued by Northeastern and a number of microcertification credentials issued by ServiceNow. Faculty from the business school and other disciplinary units work with ServiceNow to create a program that allows current employees to upskill under a learn-while-you-work mindset. ServiceNow employees can enhance their skill sets in business, data, and technology through a flexible format that allows them to apply the learning experience directly to their work, in addition to acquiring professional certifications, microcredentials, and a bachelor's degree.58

The D'Amore-McKim School of
Business has also partnered with
PwC to support the upskilling of
current PwC employees through the
use Northeastern microcredentials.
The coursework can be directly
embedded into the PwC workflow.
Upon completing the microcredential
components, employees earn
digital badges that can be stacked
into certificates, which can later
be stacked into credit toward a
Northeastern degree program.

The business school plans to expand on its PwC partnership be developing a one-year online Master of Science Management (MSM) degree primarily targeting Black and Latino recently graduated undergraduates as a way to diversify PwC's U.S. talent pipeline. Eligible students will be hired by PwC and, through the specialized MSM program, will be able to reach the 150-credit requirement to become certified public accountants, earning the CPA designation. Earning the additional 30 credits beyond the typical 120 credits required to

graduate is a common challenge for many four-year undergraduates, but it is especially difficult for minority students who may not have the time and resources to spend a fifth year of undergraduate study to obtain the 150 credits needed to become a CPA.⁵⁹

Business Schools With Business Schools

Business schools are partnering with each other to deliver microcredentials in a variety of ways. In some instances, a consortium of schools deliver courses on designated topics, with one institution granting the final credential (even if that institution didn't deliver the course). In other situations, a group of institutions create and deliver courses or modules that result in a microcredential that a learner can later apply as credit toward the partnering institutions' existing degree programs.

Outlier

Outlier is an online learning provider that has partnered with the University of Pittsburgh, in Pennsylvania, to "ensure the best virtual learning experiences on the planet." The partnership leverages top educators from around the world to deliver courses at a fraction of the average cost for college courses. Outlier courses are taught by faculty from institutions including Columbia University, University of Massachusetts Lowell, and Barnard College and organizations like NASA across six key subjects, completely online. Learners who complete a course receive three college-semester credits that are backed by the University of Pittsburgh and are transferable to other colleges and universities at the review and approval of the receiving institution.60

Master's in Management Essentials Programme

As members of the Future of Management Education Alliance (FOME)—a collaboration of global business schools sharing resources through a common learning platform to advance online business education three schools came together to create the MiM Essentials Programme.⁶¹ The program is a fully online certificate delivered by ESMT Berlin, IE Business School, and Imperial College. Composed of nine courses (three courses by each partner), the certificate is intended for learners with a bachelor's degree who may not be entirely ready to pursue a master's degree but would like to continue honing their management skills early in their career. At completion of the program, learners receive a certificate issued by all three institutions and have the option to apply academic credit equivalent to one term (three and a half months of study) toward ESMT Berlin's or IE Business School's Master's in Management degree program.

Interorganizational

Business schools may also partner with organizations or initiatives along a shared interest or goal where microcredentials can serve as a vehicle for achieving those goals.

Digital Promise

The nonprofit Digital Promise is an independent, nonpartisan organization launched in 2011 using startup capital from the U.S. Department of Education and Carnegie Corporation of New York. The organization partners with educators, schools and districts, states, employers, and professional development and training providers to create personalized skill development experiences through the use of microcredentials based on organization and individual needs.62 It has since expanded globally with the goal of accelerating innovation in education and improving opportunities for learning. One of its cornerstone initiatives is the

development of a microcredentials ecosystem of issuers, earners, and recognizers working together to personalize professional learning. Over 450 competency-based microcredentials are developed, assessed, and awarded by more than 50 partner organizations that range from institutes of higher education to nonprofit organizations to corporations. Digital Promise works with organizations to become microcredential issuers that can build microcredentials that focus on a single, desired competency backed by research, and that require submission of evidence and include a rubric or scoring guide.

WU4Juniors

Offered by Vienna University of Economics and Business (WU), WU4Juniors employs microcredentials to deepen business knowledge in a variety of topics through the school's LearnPublic platform. WU charges

no cost for its program, which includes a series of online selfstudy modules and an on-campus summer school available to 30-50 participants.

Because the online modules are conceptualized as self-study, they can be used independently by everyone interested in improving their competencies. Inputs are provided by experts from various disciplinary backgrounds from WU in collaboration with experts from outside the institution (for example, World Bank, National Bank, Supreme Court). Once the learners successfully complete an assessment, they acquire a digital badge for the completed topic, which they can share online with potential employers. If the learners acquire two or more badges, they receive the WU4Juniors certificate, which makes them eligible to apply for the summer school.63



Co-Create With Us!

As business schools seek ways that address skill set and learner needs, the types of partnerships and collaborative providers, or business partners, the boundaries of innovation.

partnerships are business microcredentials space? Is there opportunity for business schools to rethink with whom they partner or how they learning? Share with us at

What About MOOCs? A World of Microcredentials

Many educators and business school leaders likely remember the media frenzy that followed the introduction of Massive Open Online Courses (MOOCs), even predicting an end to the traditional higher education structure and universities.64 The reality today is that the demand for MOOCs has not replaced the demand for degrees, but MOOCs have pushed higher education institutions to rethink their educational delivery, embrace online learning, and expand their access to new learner markets. For example, on the Coursera MOOC platform, learners can access free courses delivered by partnering faculty that cover hundreds of specialized topics and can help individuals develop a specific skill set or understanding of a subject. Presently, Coursera partners with more than 200 universities and companies globally. Another MOOC provider, edX, partners with over 160 universities worldwide to offer job-relevant online learning to individuals in the form of projects, one-off courses, certificates, or even degree programs.

MOOC Providers and Platforms

MOOCs are online courses that are available to everyone and are typically delivered at no cost, or at a cost that is significantly lower than traditional college-credit-bearing courses. MOOCs can result in a certificate or even a degree for certain subjects and/or providers. Some of the most commonly known global providers of MOOCs include edX and Coursera, both of which brought MOOCs to the educational scene in 2012 with the goal of expanding access to education from the some of the leading institutions around the world, transforming individuals' lives through learning.⁶⁵

In Europe, the European MOOC Consortium (EMC) was developed by six leading MOOC providers and partnerships in Europe that together offer more than 3,000 MOOCs, representing a network of 400 higher education institutions and companies. The consortium offers learning opportunities in several languages, including English, French, Spanish, Italian, and German. The six EMC partners include EduOpen, FutureLearn, FUN-MOOC, Miríadax, OpenupEd, and iMooX.⁶⁶

Coursera Course Certificates

Coursera learners can obtain a digital Course Certificate, an official Coursera credential containing the logo of the partner institution offering the course, if the learner completes all required modules and assessments and pays the Course Certificate fee. Certificates do not carry academic credit but can be shared digitally to show course completion. In early 2020, Coursera launched its first bachelor's degree program—the Bachelor of Applied Arts and Sciences (BAAS)—with the University of North Texas in Denton, designed for working adults with some college education and course credits but no degree.⁶⁷ Learners who complete the fully online program are awarded a degree certificate from the University of North Texas.

edX MicroBachelors® and MicroMasters®

edX offers the MicroBachelors and MicroMasters programs, both positioned for adult learners with some or little college experience, which provide an affordable and flexible alternative to traditional degree programs. The programs grant college credit from one of edX's university credit partners that can build into a full bachelor's or master's degree. However, not all courses grant credit from the institution delivering the course.

For instance, one institution will deliver a course, but the institution awarding course credit may be different. Within the MicroBachelors Program, several institutions partner with edX to deliver courses: however, the credit is predominantly awarded by Thomas Edison State University. Conversely, in the MicroMasters program, university course providers offer more opportunities for credit transfer or other admission advantages, but it differs from institution to institution and course to course. For example, the Kelley School of Business at Indiana University partners with edX on its online MS in Accounting and MS in IT Management programs, where Kelley faculty deliver the program in a flexible format through the edX platform. Additionally, recipients of the edX MicroMasters Program in Accounting or Information Systems certificates can apply credit from the certificate to fulfill 30 percent of the coursework in Kelley's online MS in Accounting and MS in IT Management programs, if they choose to apply. However, this sort of partnership is not consistent across all institutions delivering courses through edX.

Udacity Nanodegrees

Udacity is an online upskilling and lifelong learning platform that partners with leading technology companies to "train the world's workforce in the careers of the future." Udacity

offers upskilling opportunities for individuals, enterprises, and governments around the world through programs and curricula tailored to specific organizational needs. Udacity instructors consist of industry professionals from Fortune 500 and Global 2000 companies considered leaders and experts in cutting-edge tech fields.⁷⁰ The platform offers its own form of microcredentials called Nanodegree® programs that are delivered entirely online. Each Nanodegree and consists of a series of courses in which learners develop, and then demonstrate mastery of, specific skills. At completion of the Nanodegree program, participants receive a credential of completion; however, Udacity does not confer any degrees, and its Nanodegree programs are non-credit-bearing.

Programs like the MicroBachelors,
MicroMasters, and Nanodegree
provide learners with many skill
development opportunities and may
offer advantages to learners who face
barriers to accessing educational
experiences that lead to degrees.
However, programs like these can also
present challenges for learners looking
to transfer earned credits to other
educational institutions, as they lack
transparency and quality assurance of
the credit provider.

Opportunities and Strategic Directions for Business Schools



Business Schools: The Hubs of Lifelong Learning

In the 2018 AACSB industry brief on *Lifelong Learning and Talent Management*, AACSB's board of directors and Business Practices Council at that time set forth a series of challenges and opportunities for business schools in regard to lifelong learning and talent management, many of which still hold true today. The report identifies three main challenges that business schools often face with lifelong learning efforts:

Developing a lifelong learning mindset among learners that learning is ongoing even after graduation, and the need to refresh knowledge and skills will following individuals throughout their careers.

Creating a portfolio of skills that is always being updated in order to remain relevant to the evolving needs of business, especially as the shelf life of certain skills continues to decrease. Identifying most effective methods for skill development, particularly through technology-enabled modes of delivery and the use of other innovations that align with learner needs at certain points in their careers.

As employers continue to look for ways to fill skill set gaps and business schools aim to become hubs of lifelong learning, the opportunity for deeper connections between the two is evident. Business schools must play a stronger role in preparing future and current employees for the needs of business. They are encouraged to think more broadly and innovatively about the pedagogical approaches and learning experiences they provide to fill those gaps. Further, they are encouraged to partner more closely with business to better understand market needs and evaluate their educational portfolios to ensure learner needs are being met. The innovation occurring in the credentialing space opens new opportunities for business schools and businesses to work closer together in meeting respective goals.

AACSB Calls for Strategic Thinking on Microcredentials

As illustrated by the various examples, best practices, and initiatives happening across business education, organizations, and national movements, the world of microcredentials is an evolving one that presents a unique set of challenges, but more importantly, opportunities for business schools and their business partners. The past pandemic-impacted year in particular has energized the discussion around new learning experiences, and credential pathways have been top of mind for AACSB and its networks. AACSB believes that schools must continue to embrace innovation in educational delivery in order to meet new market and learner needs, all while upholding the highest level of quality.

Alternative credentials should not be viewed as a precursor to the end of business schools and their degree programs; rather, they should be seen as an opportunity to expand access to new audiences and emerging learner needs, with quality learning experiences that only AACSB business schools can provide. Through the various discussions that have occurred over the past year among the AACSB board, committees such as the Innovation Committee and Business Practices Council, and the thousands of participants in AACSB's learning and development opportunities, it is clear that now is the time for business schools to be proactive players and leaders in alternative learning delivery and credentialing. Based on those discussions, below are guidelines that can serve as a roadmap for business schools in prioritizing their efforts in this space.

Recommendations for Leveraging Microcredentials

Understand That Microcredentials Exist on a Continuum

At a recent AACSB Business Practices Council discussion on microcredentials. members raised the idea that the world of microcredentials is not binary and exists on a continuum of options, which is evident from the breadth of examples of microcredentialed learning taking place. Potential opportunities for business schools to explore and innovate in this space are endless, especially considering the unique needs, markets, and audiences each school may be in the position to serve. Just because one school may have programs that embed or use microcredentials in a certain way, or partner with a company one way, does not mean that is the only way. The advantage of recent microcredential developments is that they help pave the way to new types of educational delivery, which allows for greater innovation and greater attention to unique learner needs.

Cultivate Effective Business Partnerships First

As motivated as many schools may be in revamping their learning offerings to include microcredentialed opportunities, it is important for schools to first evaluate their own unique needs and contexts to understand where the priorities should be. For many schools, better understanding the needs of their business partners and creating effective, strategic connections with their business stakeholders should be a first step before investing in and launching new offerings that address new skill set needs. Before a school plans and implements microcredentials programming, it should have a solid understanding of how the new credentials can strengthen the business school's strategy for connecting with

Consider Which Learner Levels You Are Best Positioned to Support

Learners who are at different points in their career path may have different needs or preferences and therefore may require different learning experiences and delivery methods. For instance, in an undergraduate degree program, leveraging microcredentials, such as badges or certificates, can help those looking to begin their career display complementary areas of interest and skill sets obtained in conjunction with their acquired degrees. Schools might embed these credential opportunities within the actual course of study or partner with organizations to create specific microlearning opportunities that complement their program learning objectives. In the continuing or executive education space features like flexibility and customizability may be greater priorities. A business school might partner with specific companies that aim to create upskilling opportunities for their current employees. Alternatively, a school might create non-degree programs or certificate options on timely business topics that can help individuals learn new skills and have a digital credential to share on social media or with prospective employers. The different career levels, learner objectives, and topics for skill development will likely result in different delivery methods, time commitments, assessments, pricing models, levels of faculty oversight, and learner experiences.

Recommendations for Leveraging Microcredentials

Evaluate Your Options and Needed Resources

The options with microcredentials are many and diverse. In planning which approach best suits a school's needs and objectives, it will need to assess available resources, level of faculty and staff expertise, and ultimate goals. This information will help in deciding whether a school should partner with educational technology providers, build a program in-house, collaborate with other disciplinary units with shared goals, hire individuals with different types of expertise, and more. Some microcredentials can be created as new program offerings while others can be the result of unbundling larger programs into microlearning opportunities. The path that is pursued will likely dictate the types of resources and expertise required.

Quality Assurance and Transparency

For AACSB schools, ensuring quality in their learning offerings (both degree and non-degree) is a top priority, as outlined in Standard 5: Assurance of Learning in the 2020 business accreditation standards. If a school seeks to include its microlearning credentials within the scope of accreditation, then it must consider learning opportunities that can "stack" into an AACSB-accredited degree program and include processes that ensure high quality and continuous improvement. However, even for microcredentials outside the scope of accreditation, processes for assuring quality should still be included, as the programs reflect the quality of the school and its faculty. Further, quality assurance provides a competitive advantage for AACSB schools to other providers that may not necessarily uphold the same level of quality and rigor.

Continue Learning and Be Ready to Be Agile

A common perspective shared by business leaders is that business schools simply do not keep up with the accelerating rate of change facing business and, consequently, the skill set needs of employees. Business is changing at a rapid pace, largely because of new technology. Business schools can also better leverage new technologies to develop, deliver, and measure outcomes of their own learning experiences in ways that may not have been possible in the past. Schools are taking advantage of the various tools already available, and with the virtual experiences that COVID-19 has arguably normalized for many educators and learners over the past year, new opportunities for innovation are emerging.

Business schools have learned through experience that they must be agile. Change and disruption are inevitable, but schools must stay current with the needs of business and learners to maintain their relevancy, especially to support lifelong learning. Schools must connect with their peers and learn from best practices as well as make greater efforts to connect with business to create an open and constant dialogue that reveals the needs of their stakeholders. Through quality improvement, learning and development opportunities, and thought leadership, AACSB is here to help and guide schools along the way.

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