



High performance. Delivered.

Digital and Blended Learning as a way to Improve Employment and Entrepreneur Outcomes

Contents

Click on any section below to navigate directly to the relevant page.

Foreword	3
Executive Summary	5
Approach and Methodology	6
Structure of the Document	7
Debunking the Myths	7
How-to-Guide	7
Definitions	8
Debunking the 10 Myths of Digital Learning	9
Section 1: Make the Case for Digital Learning in Your Organization	13
Section 2: Design Effective Educational Content	14
Section 3: Build a Scalable Operation	15
Section 4: Execute the Program	16
Section 5: Engage Stakeholders and Capture Value from Digital Learning	17
Section 6: Continuous Improvement for Digital Learning Programs	18
Your Digital Learning Journey – Taking Action	19
Works Cited	20
Acknowledgements	22

Foreword

We are delighted to share this research report, how-to-guide and toolkit entitled “How to Design and Scale Digital and Blended Learning Programs to Improve Employment and Entrepreneurship Outcomes”.

The objectives of this research are to provide insights into:

- The efficacy of digital learning as a method for delivering **Skills to Succeed** outcomes
- How digital learning can be effectively leveraged in a scalable way to better achieve and measure **Skills to Succeed** outcomes.

It is our hope that this report and tools will be useful for practitioners working to upskill job seekers and entrepreneurs via digital learning – whether as a reference to design, implement and track impact of a new program or to validate or improve an existing program. In addition, we hope the report will provide nonprofit leaders and funders a strong case for adopting or investing in digital learning to improve employment outcomes.

We want to thank the more than 30 **Skills to Succeed** practitioners from Accenture and 20 not-for-profit delivery partners who co-created this content as part of a peer-to-peer Digital Learning network. Through surveys, interviews and roundtables discussions, the group reviewed research findings from over 70 sources and translated their experiences implementing digital learning programs into a set of design principles that can help others build and scale similar initiatives. The Digital Learning Circle pushed to make this work relevant and actionable by sharing what is working as well as what has proven challenging.

Organization	Location	Digital Learning Circle Participants
Conexão	Brazil	Lucas Alves / Marcus Houry
Education for Employment	Middle East / Africa	Pia Saunders
East London Business Alliance (ELBA)	UK	James Innes
Fundación Entreculturas	Spain/ Latin America	Luís Arancibia
Institute for Veterans and Military Families (IVMF)	USA	James Shelley / Daniel Cohen
KIPP Charter Schools, DC	USA	Adam Roberts
NetHope	Global	Lisa Obradovich
Plan International	Global	John Trew/ Bo Percival/ Rodrigo Bustos
Quest Alliance	India	Aakash Sethi
Save the Children	Global	Patricia Langan
Spanish Red Cross	Spain	María Alcázar Castilla
Upwardly Global	USA	Tadd Wamester
Youth Business International	Global	Chris Massey
Accenture Academy	Global	Christopher Jepson
Accenture Learning	USA	Krista Tracy
Accenture Open Education	Global	Allison Horn/ Joanna Oldham
Accenture S2S Academy	UK	Kathryn Taylor

Use the menu bar located at the bottom of each page to easily navigate through the report.

Thank you to the superb Accenture team, who conceived of and ran the Digital Learning Circle, conducted the research and wrote the final products: Samantha Fisher, Anna Roumiantseva and Rosanne Williams.

Together with our strategic partners, we have equipped more than 800,000 people with workplace and entrepreneurial skills – more than triple the impact we set out to achieve when we first established our **Skills to Succeed** goal in 2010. We recognize that no single organization can single-handedly address the issues of employment and entrepreneurship. It takes collaboration across an ecosystem of nonprofit partners, government agencies, employers and other donors, to create meaningful work, lasting change and sustainable economic growth for millions of people worldwide. Having just set our goals for 2020 (see call out box below), we will continue to test ways of creating a global learning network of **Skills to Succeed** practitioners and to distill and disseminate shared insights that can help us collectively improve results for jobseekers and entrepreneurs. We encourage you to give us your feedback and help us shape the journey ahead together.



Jill Huntley
Managing Director
Global Corporate Citizenship,
Accenture



Lisa Neuberger
Director
Global Citizenship Programs,
Accenture

About Accenture Skills to Succeed

Having the right skills to open doors to meaningful, lasting employment or business ownership is critical. We launched **Skills to Succeed** in 2009 to address this need and to advance employment and entrepreneurship opportunities in markets around the world. By mobilizing our people, partners, clients and others, we strive to make a measurable and sustainable difference in the economic vitality and resilience of individuals, families and communities.

By the end of fiscal 2020, together with our strategic partners, we will pursue the following targets:

Demand-led Skilling

Equip more than three million people with the skills to get a job or build a business.

Employment and Entrepreneurship Outcomes

Increase our focus on the successful transition from skill-building programs to sustainable jobs and businesses and improve our collective ability to measure and report on these outcomes.

Collaboration for Systemic Change

Bring together organizations across sectors to create large-scale, lasting solutions aimed at closing global employment gaps.

The **Skills to Succeed** strategy includes leveraging technology to **accelerate and expand impact**. Relevant technologies will be leveraged across these areas:



Performance management and data analytic tools, including tools to assess skill/capability requirements and industry demand



Skilling via digital tools and content to create, share and deliver skilling content



Mobile learning tools to expand the reach of programs



Community building tools to facilitate sharing of knowledge between job seekers and entrepreneurs

Executive Summary

There is no shortage of new digital learning companies, initiatives and innovations that have emerged across the education and training industry in response to the impending digital disruption in education.

As in any period of innovation and disruption, some of these ventures have been successful, while others less so. The failures are often held up to fuel skepticism around the efficacy of digital learning as an education method. A variety of myths have therefore popped up around digital learning that this report seeks to debunk.

In all, this report finds that examples of less successful digital learning programs are more due to suboptimal design and implementation than to inherent problems with the digital learning method itself. It finds that digital learning is an inherently effective learning method to achieve **Skills to Succeed** outcomes. The question is not so much whether digital learning is effective, but rather how can a digital learning program be designed and implemented effectively.

To summarize and simplify the key conclusions of the research:

- **Learners:** There is a case for using digital and blended learning to impart the type of skills that workforce development programs generally aim to impart to the beneficiaries they generally aim to serve.
- **Content Design:** The design choices involving the mode, method, timing and customization of delivery often involve making trade-offs between cost/complexity and efficacy. They need to be designed with the needs of the particular set of beneficiaries and targeted program outcomes in mind.

Myth	Truth	Caveat
1. Learner outcomes are not as good with Digital learning	Planned learning outcomes are the same if not better with digital and online learning – as long as the content is effectively designed	Unplanned or “incidental” learning (e.g. – social skills) outcomes are not as good with 100% online programs, but can still be realized through blended learning
2. There is no real cost savings by adopting Digital learning	Digital learning is less costly per beneficiary over time for 83% of cross-sector organizations	There needs to be a plan in place to pay back the relatively higher upfront investment
3. Digital learning is not effective when used with disadvantaged populations	Nearly all beneficiaries can be served by digital learning	Some are more immediately suited for digital learning while others require preparatory courses
4. Digital learning is not suitable to teach certain skills	No type of technical or employability skills are more or less suited to the digital medium than others	There needs to be alignment between the type of skill taught and the structure by which it is taught
5. The customization needed for Digital Learning to reach new areas (i.e., locations, types of beneficiaries, etc) prevents it from being scalable	Digital allows for the customization needed to adapt content to new cultures or languages in a scalable way that is not possible in purely classroom-based programs	Customization is a delicate balance of cost vs. applicability
6. It is too difficult for beneficiaries to use Digital Learning due lack of ICT availability	Digital Learning programs have been successfully designed for all stages of connectivity, overcoming existing hurdles to accessibility	Some are more immediately suited for digital learning while others require preparatory courses
7. Digital Learning puts the trainer’s job at risk	Instructors can enjoy benefits of reduced instruction time and more coaching and advising time to improve the quality of the learning outcomes. Trainer capacity can also be redirected to help the program to scale with new course sections, or higher student throughput	
8. The trainer training for Digital Learning is not much different than for a classroom program	Transitioning to a new pedagogy as well as learning to leverage the digital medium effectively for teaching purposes requires significant training	This process of teaching trainers how to leverage online resources effectively for digital learning takes time. It is not successful to expect trainers to self-train on their own time
9. There is no real way to validate if learning has taken place in Digital Learning	LMS capabilities can greatly facilitate the collection and management of learner skill-level data	Some organizations can additionally choose to validate learning for the program as a whole, not just the digital learning portion
10. Digital Learning has no impact on the ability to track and serve alumni	Digital allows either refresh or new content to be provided to alumni at a minimal cost. The ability to access follow-up training is one of the most in-demand services by learning program alumni	

- **Barriers:** Barriers to implementation, such as access to ICT infrastructure, resistance of trainers, or motivation of learners, while formidable, are able to be overcome.
- **Scaling:** Taking the program to scale works better with a suitable technology platform, a digitally-focused operating model and the leveraging of partnerships across the workforce development ecosystem.
- **Execution:** Impactful programs tend to be well executed, manage change and stakeholder expectations from start to finish and continuously seek to improve.

We aim to develop concrete and actionable advice, grounded in available secondary research, time-tested Accenture methodologies and the experience of digital learning implementers across the Skills to Succeed practitioner network.

Approach and Methodology

We aim to develop concrete and actionable advice, grounded in available secondary research, time-tested Accenture methodologies and the experience of digital learning implementers across the **Skills to Succeed** practitioner network. This report has been co-created both by practitioners and for practitioners based on their experiences of what does and does not work in digital learning. While we recognize that training (digital or otherwise) may be insufficient for some beneficiaries to gain and retain employment, the additional non-training interventions that may be necessary complements were not a key part of this guide's scope.

The research was structured as an iterative learning endeavor to produce insights for the field in addition to providing a space for digital learning practitioners to learn and share from each other over the course of the six month project and beyond. The report and how-to-guide focus specifically on the areas of best practice in program design and operation that are unique to Digital and Blended Learning. The findings in the report are supported by:

- **Digital Learning Circles:** Two digital learning circles that brought together over 20 **Skills to Succeed** practitioners to conduct working sessions to refine, clarify and synthesize how to design and scale digital learning programs to improve employment and entrepreneurship outcomes. This also included interviews with the participants to talk about their experiences with digital learning.

- **Skills to Succeed Practitioner Survey:** A survey of over 30 **Skills to Succeed** practitioners who have implemented a pilot, full program, or both in digital and blended learning.
- **Secondary Research** from over 75 studies, papers and theories on the topic of digital and blended learning.
- **Accenture Models, Tools and Assets:** A sampling of Accenture's time-tested tools, including program management and value realization tools, have been modified to address the needs of digital learning programs.

Structure of the Document

Debunking the Myths

We summarize our insights into "Debunking the 10 Myths of Digital Learning" that often act as a barrier to adoption of digital learning programs in the workforce development space. The "truths" are supported by research linked to the remainder of the document.

How-to-Guide

The hallmarks of a successful workforce development program, digital or not, include a strong impact case, an effective and scalable design, smooth execution and continuous improvement. Many of these principles do not differ greatly in their handling for a digital learning program as compared to a classroom learning program. For the purpose of this guide, we focus primarily on areas that require unique treatment in the context of a digital learning program. The how-to-guide uses evidence to develop and present recommended steps to design, implement and run a strong digital learning program. As digital learning really sets itself apart particularly in the area of effective educational content design, this guide focuses a large percentage of its content on that topic. Below, please find the framework and topics described in this report and guide.



How do each of these areas need to be handled differently with a digital learning program vs. a classroom program ?

1. Make the Case for Digital Learning	<ul style="list-style-type: none"> • Target Strategic Impact • Quantify and Present the Case 	
2. Design Effective Educational Content	<ul style="list-style-type: none"> • Serve Beneficiary Groups • Inform Content with Market Demand • Use Digital to Train Different Skills • Determine Percent of Blend • Deliver Content Synchronously vs. Asynchronously • Customize vs. Industrialize 	<ul style="list-style-type: none"> • Design Methods for Imparting Content • Overcome Barriers to Accessibility • Enable Trainers • Validate Learning • Motivate Learners • Develop Supportive Alumni
3. Build a Scalable Operation	<ul style="list-style-type: none"> • Partner Across the Workforce Development Ecosystem • Design the Detailed Digital Learning Operating Model • Select Supporting Technology 	
4. Execute the Program	<ul style="list-style-type: none"> • Design and Execute the Pilot • Roll Out the Full-scale Program 	
5. Engage Stakeholders and Capture Value from Digital Learning	<ul style="list-style-type: none"> • Define, Understand, and Measure Program Performance • Manage Change 	
6. Continuous Improvement	<ul style="list-style-type: none"> • Continuously Improve 	

Definitions

Definition of "Digital Learning" in this Report

For the sake of brevity, we have used the term "digital learning" throughout this document to mean both e-learning and blended learning, unless otherwise specified.

- E-Learning or online learning is defined as a pedagogy whereby content is delivered exclusively through digital means and without a live teacher physically present.
- Blended Learning is a pedagogy that blends digital and live classroom components, typically with a minimum of 30% of student time being spent on digital components.
- Digital learning is not the same as digitally enabled classroom learning, which is the term for a live teacher delivering content to students in a classroom while leveraging digital tools.

Definition of "Trainer"

To be true to the quoted content of the research and case studies, we refer to the person(s) delivering educational content by using multiple terms, including, but not limited to, "instructor", "trainer", "teacher", "adviser", or "faculty". For the purpose of this research, we assume their role in digital learning to be substantively equivalent, though we do acknowledge that the different titles can be very meaningful.

Definition of Skill Types

- Technical Skills: "Technical skills are specialized knowledge and abilities used to perform a specific task. Technical skills are not unique to the specific individuals performing the task, but are particular to their field of employment. Most professions have specific skills that need to be mastered if an individual wants to rise to the top of the field." (Investopedia, LLC)
 - Technology
 - Digital
 - Industry
 - Functional.
- Employability Skills – skills that help individuals seek, obtain, retain and succeed in employment and life management. This category of skills is frequently referred to in the market as "Soft Skills".
 - Work Readiness Skills – such as identifying skills and interests, setting career goals, writing a resume, searching for a job and contacting employers – help [job seekers] find and obtain employment
 - Performance Skills – such as working in a team, time management and accepting supervision respectfully – help [employees] meet the social and business requirements of the workplace and keep a job.
- [Foundational] Life Skills* – such as maintaining health and hygiene, problem-solving, conflict management... help [employees] manage their lives in a safe and healthy manner and balance work as part of a broader set of demands and opportunities." (Goldin)

Definition of Skill Levels

Reflects the amount of training required to acquire the skill to sufficient level of proficiency. Conclusions in this report primarily concern digital learning as a means for training toward middle and high skill employment.

- High Skills – professional/technical and managerial skills, typically requiring a bachelor's degree or extensive training
- Middle Skills – require some significant post-secondary education or training, but less than a bachelor's degree
For additional detail, see a recent report on bridging the middle skills gap in the US [here](#) (published jointly by Accenture, The Harvard Business School, and Burning Glass Technologies).
- Low Skills – require secondary education or less, typically in the service and agricultural sectors. (Holzer)
- * The placement of [Foundational] Life Skills in the overall skills hierarchy presented here differs from that of the original source document.

Debunking the 10 Myths of Digital Learning

There is no shortage of new digital learning companies, initiatives and innovations that have emerged across the education and training industry in response to the impending digital disruption in education.

As in any period of innovation and disruption, some of these ventures have been successful, while others less so. The failures are often held up to fuel skepticism around the efficacy of digital learning as an education method. A variety of myths have therefore popped up around digital learning that this report seeks to debunk.

This report finds that examples of less successful digital learning programs are more due to suboptimal design and implementation than to inherent problems with the digital learning method itself. This report finds that digital learning is an inherently effective learning method to achieve **Skills to Succeed** outcomes. The question is not so much whether digital learning is effective, but rather how can a digital learning program be designed and implemented effectively.

Myth #1: Learner outcomes are not as good with digital learning

Truth

Planned learning outcomes have been shown to be the same if not better with digital and online learning. While Massive Open Online Courses have developed a poor reputation for high dropout rates that result does not inevitably carry over to blended workforce development programs. Organizations such as the East London Business Alliance (ELBA) have achieved remarkably low drop-out rates of less than five percent by carefully designing their incentives for completion of their digital learning programs. Additionally, digital learning can lead to 25%–60% improved content retention relative to traditional classroom learning (Evans, 2013).

Caveat

Critical to digital learning benefits is effectively designed content, such as adaptive, gamified, or social learning. Simply putting classroom content into an online medium is not sufficient to realize true gains from digital learning.

- Adaptive learning benefits: Adaptive learning leverages advanced technology to deliver personalized learning at scale. In a 2013 report by the Bill and Melinda Gates Foundation, integrating adaptive learning components into digital learning increased learner course pass rates by 18%. These same learning components were shown to reduce student course withdrawals by 47% (Waters, 2014).

- Gamified learning benefits: Gamified learning either turns the process of learning into a game (through badges, leader boards, etc.) or leverages games as part of the actual learning process. A study by the University of Colorado Denver found that students who learned through gamified eLearning courses scored 14% higher than those who learned through the traditional classroom (Sitzmann, 2011). Another study by the Kauffman Foundation found that learning through games can improve retention by over 108% (Ballance, 2013).
- Social learning benefits: Social learning integrates a social element into the learning process either in an integrated way (e.g. through concurrent chats during live webinars) or indirectly (e.g. through social learning study groups). While social platforms can be leveraged in non-digital learning as well, they are especially key in building digital program engagement since they serve as the principal channel of interaction. Highly engaged students in digital programs are reportedly twice as likely to use social platforms as the general learner population (Dixson, 2010).

Online learning platforms also provide several elements of "incidental" learning in addition to the curricular learning, such as time management and self-discipline. However, certain "incidental" learning elements are generally acquired through in-person learning environments and have had little success in being replicated in purely online environments. Examples include development of interpersonal relationships and cultural awareness (Kerka, 2000; Wang, 2014). Adding an in-person component to a purely online program (creating a blended program) can help to maximize incidental learning benefits.

[For more information click here](#)

Myth #2: There is no real cost savings by adopting digital learning

Truth

Digital learning programs provide the opportunity to reduce the total cost per beneficiary over time. A recent study showed that by switching to digital learning corporations saved on average 50%-70% of their training costs (Gutierrez, 2012), and these savings are by no means restricted exclusively to the corporate sphere. A recent eLearning Guild™ member survey of 32K cross-sector organizations reported 83% of the organizations had been able to reduce costs to under \$150/beneficiary thanks to digital learning – significantly less than the cost required to administer the equivalent programs in-person.

The key drivers behind these cost benefits are greatly reduced capital costs, reduced instructor costs (due to a greater student-to-teacher ratio possible with same quality) and content creation costs. This leads to greater program efficiency, effectiveness and productivity.

Caveat

It is critical to take into account the relatively higher initial investment required to launch a digital learning program when estimating payback time.

[For more information click here](#)

Myth #3: Digital learning is not effective when used with disadvantaged populations

Truth

Digital learning can be successful with a broad range of beneficiaries across ages, geographical regions, backgrounds and socioeconomic conditions.

Caveat

While all beneficiaries can be served by digital learning, they can broadly be divided into two groups: those immediately suited for digital learning and those who require preparatory courses.

- Immediately suited: Beneficiaries immediately suited to digital learning have certain capabilities, such as basic technology skills, reading/writing proficiency, ability to work independently, a motivation to learn or a willingness to ask for help.
- Preparatory course required: The lack of these capabilities does not indicate that it is impossible to serve the beneficiaries, but rather that they would be most successful if they received preparatory courses prior to partaking in digital learning. The cost and time required for preparatory courses needs to be built into the plan for organizations serving these groups.

[For more information click here](#)

Myth #4: Digital learning is not suitable to teach certain skills

Truth

Research findings do not point to any particular types of technical or employability skills being more or less suited to the digital medium than others.

Caveat

The key reason that many digital learning programs underperform appears to be a misalignment between the type of skills being taught and the program's structure. As such, the principal question to ask when designing a digital learning program is not so much which type of skill but rather how each type of skill can be taught effectively digitally. There are two main program structure types to be considered as part of this design process (Adams, 2010): a "First Generation" Model more suited to technical skills and a "Second Generation" model more suited to employability skills.

[For more information click here](#)

The customization needed for digital learning to reach new areas (i.e., locations, types of beneficiaries, etc) prevents it from being scalable

Truth

Digital allows for the customization needed to adapt content to new cultures or languages in a scalable way that is not possible in purely classroom-based programs. Customization is a delicate balance of cost vs. applicability when it comes to digital learning.

Methods for customization, from least to most costly, include:

- **Customization of classroom component to best contextualize digital content**

This approach allows programs to introduce an element of customization through the help of the classroom teacher, without any costly modification to the digital part of the program.

- **Curation of digital curriculum for each group or individual (which courses students should take in which order)**

The organization has a database of possible courses and beneficiaries are assigned to the courses that are most relevant to them (in the order that is most appropriate for them) – none of the content of any of the courses is customized in any way; the only thing that is customized is the order in which the learner experiences it.

- **Customization of digital material content for different beneficiary groups**

The content of the various courses is customized by beneficiary group or individual beneficiary. While the core essence does not generally change (the theory of what is being taught), the learning objects (the examples, videos and readings associated) can vary widely based on beneficiary culture, experience and skill level. While this model can often improve content relevance to learners, it is more costly to implement since it requires a much larger base of content to be developed and integrated into the program.

- **Customization of the entire platform**

Learners are each exposed to materials from different content providers, through different LMSs, on different device types, with different assessment structures. This is the most radical customization option, which usually also makes it the most expensive and complicated to implement.

[For more information click here](#)

Myth #6: It is too difficult for beneficiaries to use digital learning due lack of ICT availability

Truth

It has been proven possible to overcome and work around ICT hurdles in nearly every environment. Lack of access to the ICT needed for digital learning can be due to the general infrastructure situation in a given locality, or due to a particular beneficiary's lack of access. An increasing number of digital learning programs are overcoming challenges of service cost and reliability to deliver impressive results. Digital learning programs have now been designed for all stages of connectivity – from learning on tablets in hyper-connected cities to mobile learning (mLearning) programs over feature phones in remote villages. The best technology for the program is the technology the beneficiaries have, know how to use and can afford (Trucano, 2013). Some programs ambitiously try to implement new technologies, introducing added layers of complexity to the program. Various methods have been successfully employed to overcome existing hurdles to accessibility without requiring new technologies, such as:

- Establishing community centers with shared access
- Making content available offline and syncing the device when it comes back online
- Bypassing the broadband network in favor of cell phone network (feature phones).

Caveat

ICT barriers can present some of the most significant hurdles to setting up a digital learning program and require careful planning to work around the hurdles.

[For more information click here](#)

Myth #7: Digital learning puts the trainer's job at risk

Truth

Contrary to popular belief, digital learning represents an opportunity for the trainer. Instructors often need to spend less time per learner – a recent study found that eLearning typically requires from 40% to 60% less instructor time than the same material delivered in a traditional classroom setting (Evans, 2013). This can translate into several different benefits for instructors, including opportunity to shift focus from straight transferring of content to advising and coaching, helping to provide better quality learning and learning outcomes. Trainers can also shift their time and focus on helping the program scale (additional course sections, more student throughput, etc). While the earning potential and working hours of the instructor can remain unchanged, the program can benefit from a lower cost-per student.

[For more information click here](#)

Myth #8: The trainer training for digital learning is not much different than for a classroom program

Truth

Transitioning to a new pedagogy as well as learning to leverage the digital effectively for teaching purposes requires significant training. According to Michael Trucano, The World Bank's senior ICT and education policy specialist, "If there is one clear lesson from the introduction of educational technologies in schools around the world, it is that teacher training is critical to the success of such initiatives. Outreach to teachers, through both regular technical and pedagogical support and on-going professional development, should be seen as cornerstones of any large ICT investment in schools." (Trucano, 2010)

Teaching instructors how to leverage online resources effectively for digital learning takes time. Programs need to consider this as being part of employees' normal work (not something done on their own time). Instructors who take additional training in their free time for further qualification should be acknowledged, encouraged and rewarded through accomplishment certificates (Friedrich, 2010).

[For more information click here](#)

Myth #9: There is no real way to validate if learning has taken place in digital learning

Truth

The LMS capabilities that are often core to digital learning programs greatly facilitate the collection and management of learner skill-level data, giving the program a more holistic picture of each learner's capabilities at any given point in time. In order to track progress, programs can:

- Track course completion: While this does not prove that learning was absorbed, it does guarantee that it was consumed.
- Verify acquisition of skills post-training: Much like traditional classroom learning, digital learning can incorporate learner assessments to track the level of skill attained post-training. Digital learning in the form of adaptive programming, games, or other formats can also go a step further by measuring not only comprehension but also decision-making ability with the content. This is difficult to achieve through traditional quiz-type assessments. (Allen, Dirksen, Quinn, Thalheimer; 2014).
- Measure relative improvement in skills: In order to know incremental improvement in skill, a baseline must first be established. Research has found that this is a big missing piece for most digital learning programs, with 67% of interviewed program directors reporting that they do not measure the effectiveness of their net-based programs. (Strother, 2002).
- Provide certifications or badges: Organizations can provide badges for learners that are recognized in the employment marketplace.

Caveat

Some organizations choose to validate learning for the program as a whole in lieu of measuring the digital learning effectiveness alone. While there is value in measuring these program outcomes, understanding the impact and improvement areas of digital learning remains important.

[For more information click here](#)

Myth #10: Digital learning has no impact on the ability to track and serve alumni

Truth

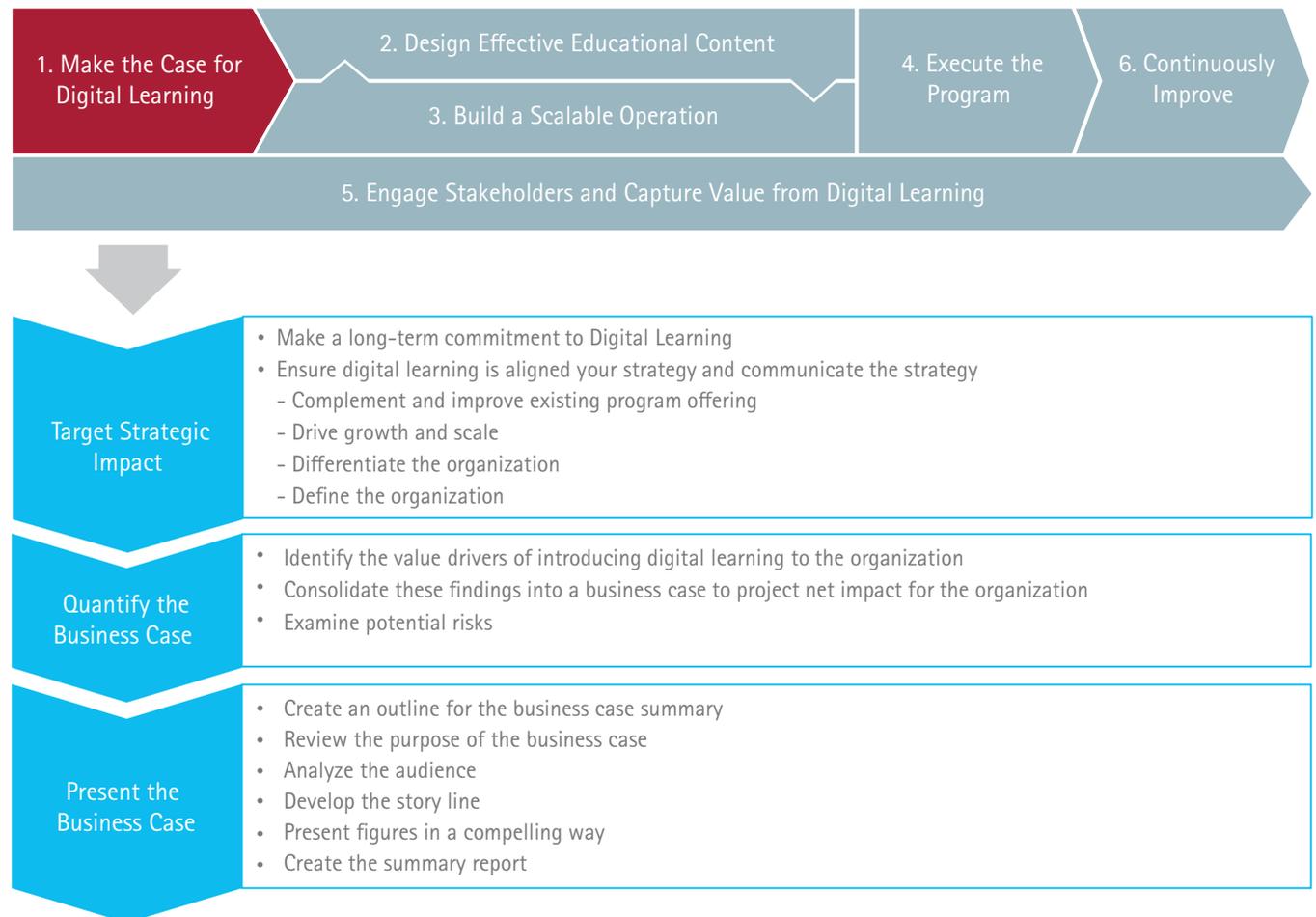
The ability to access additional follow-up training is one of the most in-demand services by learning program alumni – whether it is to refresh the knowledge they gained during the program or learn additional skills that they come to need after graduation. With the digital medium, they are able to access this content as needed at minimal cost to the organization (Carrington Crisp Limited, 2014). This follow-up training access for alumni is a best practice cited in the E-Learning Manifesto (Allen, Dirksen, Quinn, Thalheimer; 2014). Continued support to alumni has an impact on willingness of alumni to contribute to the program later on, through direct giving, mentoring, or as connections to employers.

[For more information click here](#)

Section 1: Make the Case for Digital Learning in Your Organization

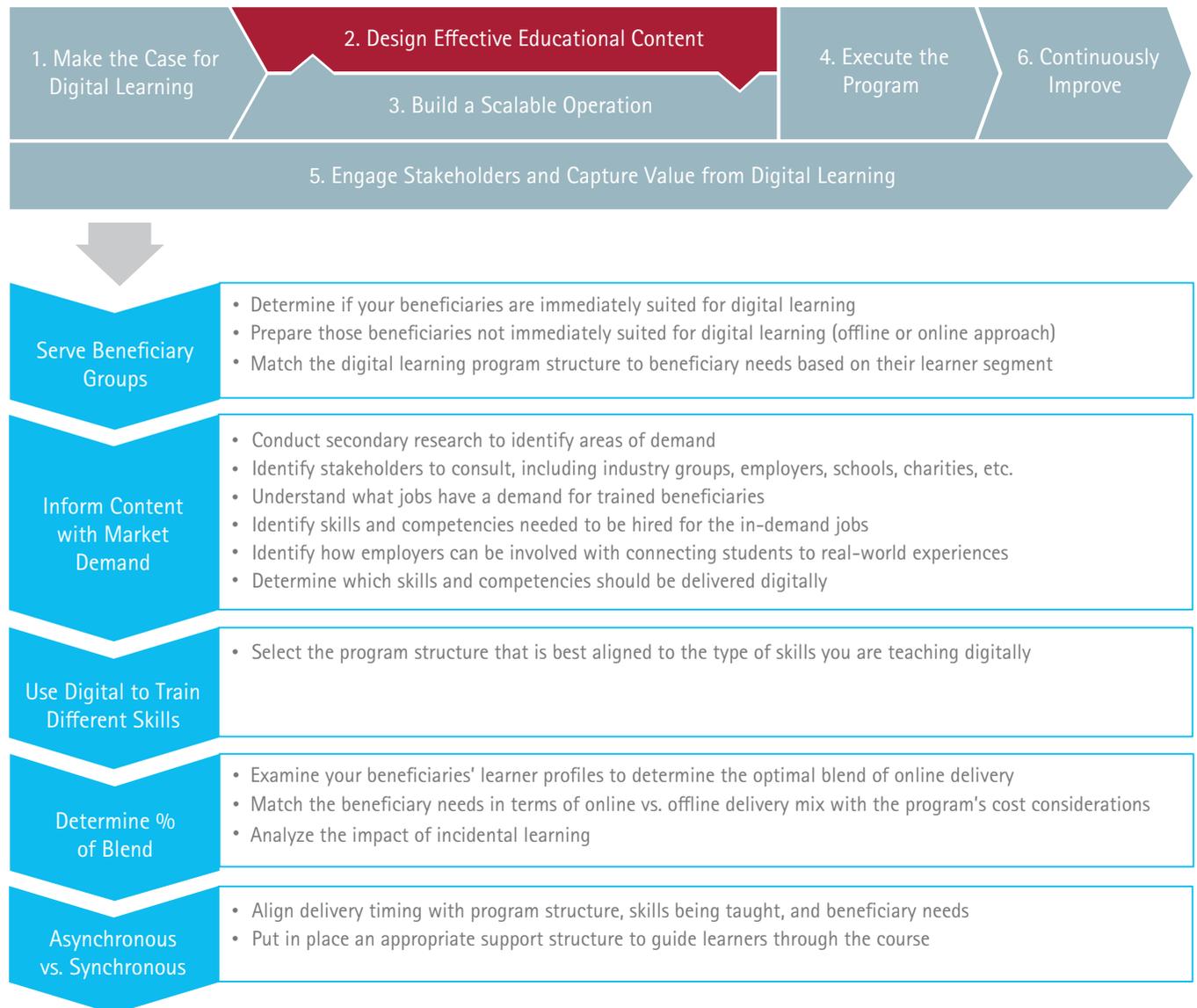
Target Strategic Impact

Digital learning is most successful if it is clearly communicated as an aligned and committed part of an organization's long term strategy. Organizations successfully incorporate digital learning into their strategy in different ways depending on their mandate and mission.



Section 2: Design Effective Educational Content

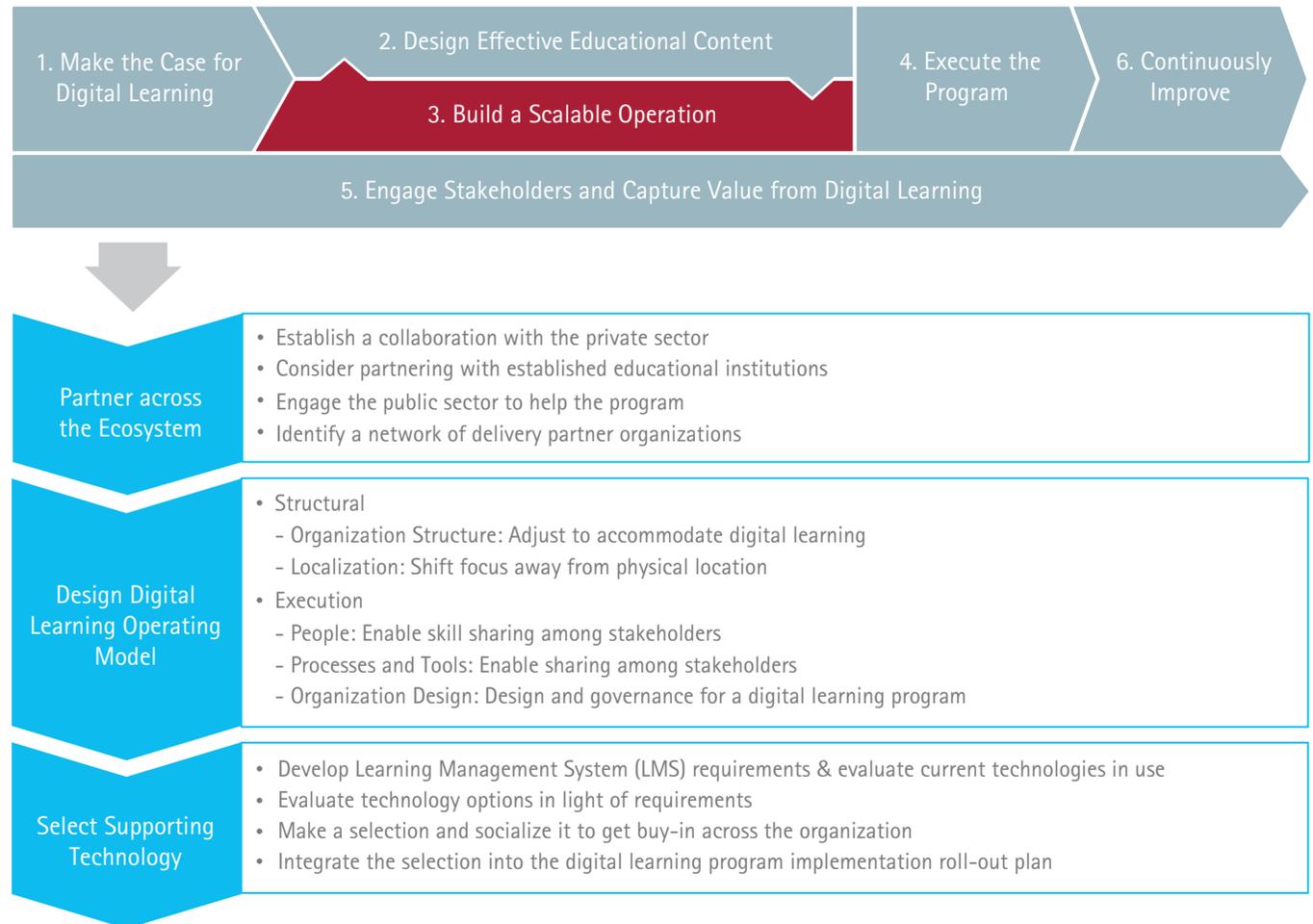
Digital learning can be successful with a broad range of beneficiaries across ages, geographical regions, backgrounds and socioeconomic conditions, though some beneficiaries are immediately suited to digital learning, while others require preparation. Segmenting learners accordingly can help define the digital learning program structure best suited to each group.



Section 3: Build a Scalable Operation

Partner across the Workforce Development Ecosystem for Digital Learning

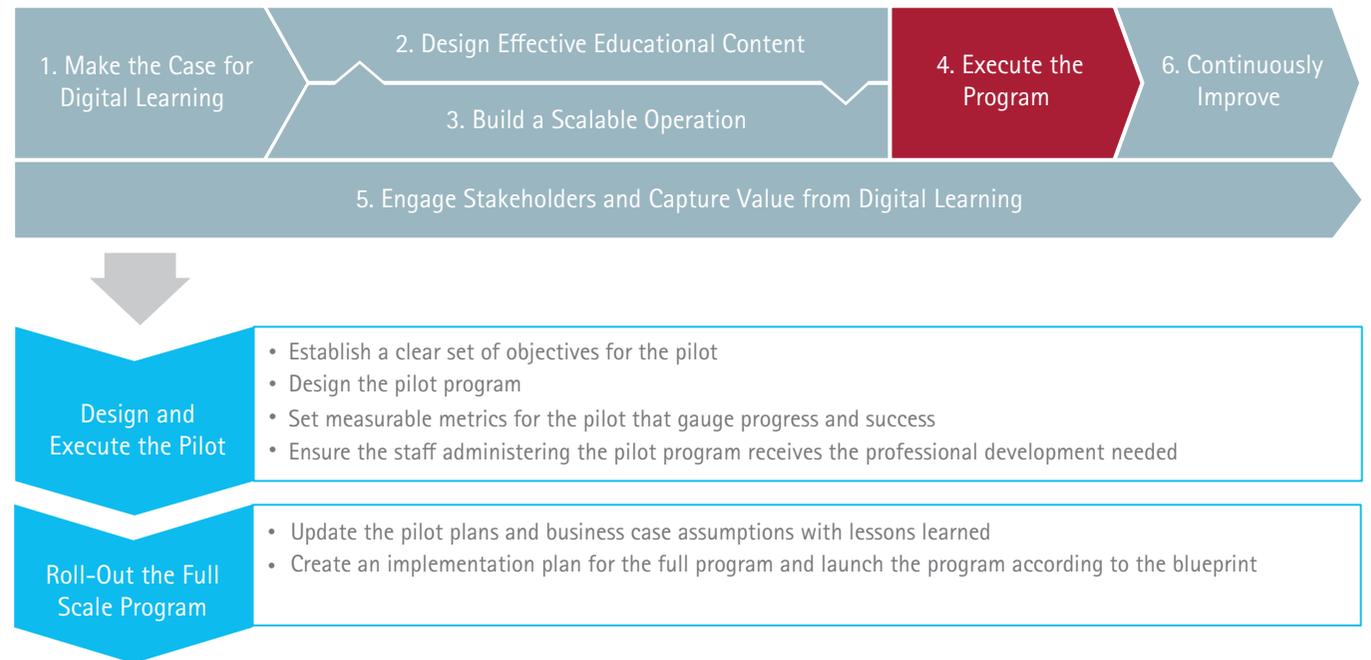
Successful digital learning programs require collaboration across a diverse set of potential partners, each of whom brings certain capabilities to help the programs scale. These include: private companies, governmental organizations, educational institutions and nonprofit delivery organizations.



Section 4: Execute the Program

Design and Execute the Pilot

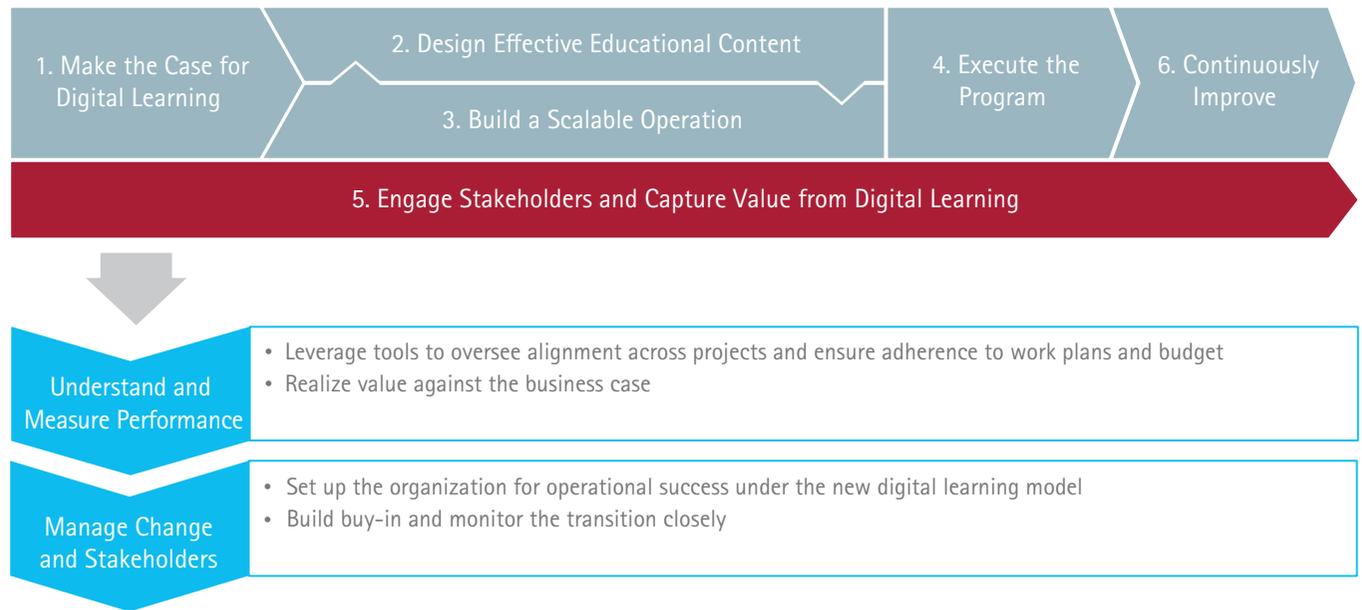
While pilots for all programs are critical to ultimate success, digital learning pilots need to take special care to ensure instructors are sufficiently trained to deliver digital learning and need to account for the longer time-to-impact when designing pilot success metrics.



Section 5: Engage Stakeholders and Capture Value from Digital Learning

Define, Understand and Measure Digital Learning Program Performance

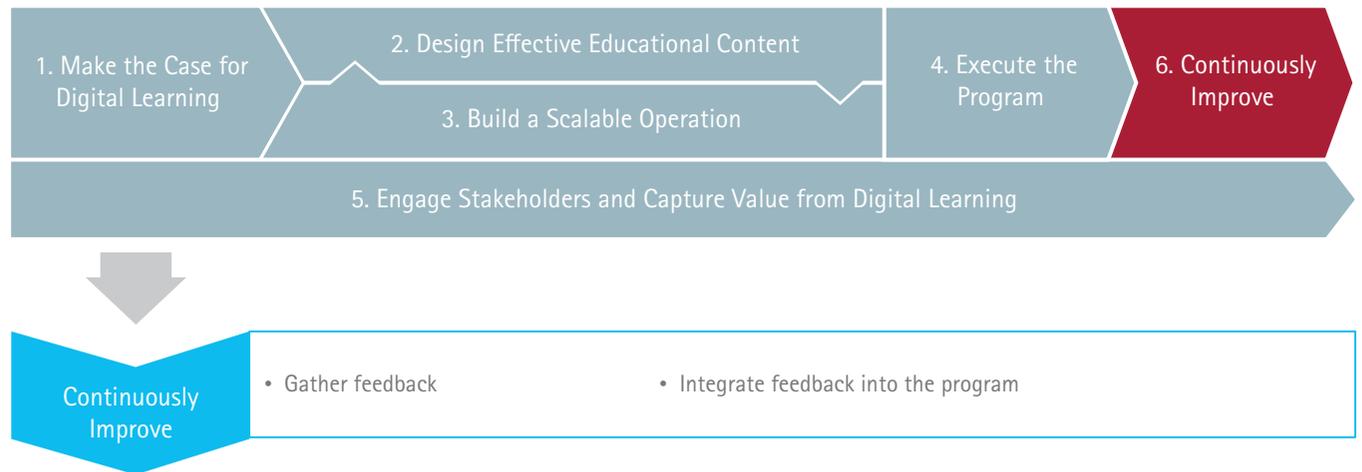
Managing any program and monitoring its progress from day one is key to realizing the projected program impact. Data held within digital learning programs often makes it easier to track metrics and identify issues.



Section 6: Continuous Improvement for Digital Learning Programs

Steps to Achieve

Launching a successful digital program is not sufficient to ensure its continued success. Like with most programs, digital and otherwise, it must be constantly evaluated to understand what's working and what's not.



Your Digital Learning Journey – Taking Action

As evident from our research and insights, digital learning is an effective and strategic enabler to scaling **Skills to Succeed** employment and entrepreneurship outcomes. It is not a matter of 'if' digital learning is used, but rather 'when and at what pace'. Yet, the path from business case to implementation can be complex, and the considerations and decisions at each step are numerous.

Our **Skills to Succeed** Digital Learning Circle members share some key takeaways to support digital learning programs:

- Treat digital learning programs as strategic initiatives
- Focus on the long term, even if starting small
- Identify a strategy for metrics and reporting results from the start
- Lead with the beneficiary at the center of the program design, and the right design solution will follow
- Be open to an iterative design process – don't wait for perfection
- Explore creative solutions, including reusing existing online curricula where relevant and leveraging the many low cost tools available
- Partnering can be a really effective way to drive scale, so take advantage of opportunities to build a network – with employers, with public sector and/or with educational institutions. There are many ways to build a collaborative solution.

While this report and how-to guide are the result of a comprehensive and collaborative research project, there is ample opportunity to continue to explore models for adopting and scaling digital learning. It is our hope that through the continued collaboration of the **Skills to Succeed** Digital Learning Circle we will define and test approaches that will improve our collective performance for job seekers and entrepreneurs. This report and how-to guide are living documents. As we continue to learn, collaborate and innovate around digital learning, we will update this collection of assets.

Whether you are in the investigative stage of digital learning as an enabler of your organization's goals, in the midst of a digital learning implementation program, or are focused on scaling digital learning programs you've already implemented, we look forward to receiving your feedback on the relevance of these materials – both what works and what can be improved. Please contact us at CorporateCitizenship@accenture.com with any comments.



[Video Transcript: Digital Learning Circles](#)

Works Cited

- Abel, R. (2005). Achieving Success in Internet-Supported Learning in Higher Education: Case Studies Illuminate Success Factors, Challenges, and Future Directions. Alliance for Higher Education Competitiveness. <www.ahec.org/research/study_reports/lsL0205/TOC.html>
- Abel, R. (2005). Implementing Best Practices in Online Learning. Educause Quarterly. <<http://net.educause.edu/ir/library/pdf/eqm05312.pdf>>
- Accenture. (2011). Change Management Sub-Offering Overview Deck.
- Accenture. (2004). Selling Program Management. PPM Community of Practice.
- Accenture. (2012). Methodology for Supporting the Design, Deployment, and Delivery of a New Operating Model.
- Accenture. (2013). Banking on Digital: Enabling a Digital First Mindset. Digital Operating Model. <<http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture-Interactive-BankingEnabler-Digital-Operating-Model.pdf>>
- Accenture, (2014). Digital Learning Survey
- Adams, J. (2010). A Four-level Model for Integrating Work and e-Learning to Develop Soft Skills and Improve Job Performance. The IUP Journal of Soft Skills. Vol. 4(4), 2010: 48-68.
- Allan, B. Lewis, D. (2006). Virtual Learning Communities As A Vehicle For Workforce Development: A Case Study. The Journal of Workplace Learning.
- Allen, M. Dirksen, J. Quinn, C. Thalheimer, W. (2014). eLearning Manifesto. <<http://elearningmanifesto.org/>>
- Andres, C. Joo, K.P. Shearer, R. (2014). Promoting Distance Learners' Cognitive Engagement and Learning Outcomes: DesignBased Research in the Costa Rican National University of Distance Education. The International Review of Research in Open and Distributed Learning. <<http://www.irrodl.org/index.php/irrodl/article/view/1908/3182>>
- Bailey, J. Ellis, S. Schneider, C. Vander Ark, T. (2013). Blended Learning Implementation Guide. Digital Learning Now. <http://digitallearningnow.com/site/uploads/2013/02/DLNSmartSeries-BL-paper_2012-02-05a.pdf>
- Ballance, C. (2013). Strategic Ways to Develop Game-Based Learning for High ROI. Association for Talent Development. <<https://www.td.org/Publications/Magazines/TD/TD-Archive/2013/09/Strategic-Ways-to-Develop-Game-Based-Learning>>
- Bassi, R. (2010). Practical guide to Pilot Projects and Large Scale Deployment of ICTs in the Education Sector. Global e-Schools and Communities Initiative. <http://www.researchictafrica.net/policy/universal_access_and_service/International-GESCI_Pilot_Projects_Education.pdf>
- Bayerlein, L. McGrath, N. (2013). Engaging Online Students Through the Gamification of Learning Materials: The Present and the Future. H. Carter, M. Gosper and J. Hedberg (Eds.), Electric Dreams. Proceedings ascilite 2013 Sydney. (pp.573-577). <<http://www.ascilite.org/conferences/sydney13/program/papers/McGrath.pdf>>
- Bennet, P. W. (2012). Digital Learning and the Social Media: What Frightens the School Change Managers? Educhatter's Blog. <<https://educhatter.wordpress.com/2012/08/03/digital-learning-frontline-what-frightens-the-school-change-managers/>>
- Blois, Z. (2013). 7 Steps to a Successful Digital Learning Pilot. <<http://blog.wowzers.com/bid/300433/7-Steps-to-a-Successful-Digital-Learning-Pilot>>
- Bozarth, J. (2010). Nuts and Bolts: How to Evaluate e-Learning. Learning Solutions Magazine. <<http://www.learningsolutionsmag.com/articles/530/nuts-and-bolts-how-to-evaluate-e-learning>>
- Bradshaw, D. (2015). INSEAD Brings Online Learning to Customized Courses. Financial Times. <<http://www.ft.com/intl/cms/s/2/42aa3666-a185-11e4-bd03-00144feab7de.html#axzz3RKZY5cMw>>
- Briggs, S. (2014). How Educators Around The World Are Implementing Mobile Learning (And What You Can Learn From Them). informED. <<http://www.opencolleges.edu.au/informed/features/how-educators-are-practicing-mobile-learning/#ixzz3QFAcrN5m>>
- Calson, A. M. (2015). Culturally Relevant Teaching: Strategies, Definition & Quiz. Education Portal. <<http://education-portal.com/academy/lesson/culturally-relevant-teaching-strategies-definition-quiz.html>>
- Carrington Crisp (2014). See the Future 2014. <<https://www.efmd.org/images/stories/efmd/Blog/StartFeb14/See%20The%20Future%202014.pdf>>
- Center for Education Innovations. (2014). Public-Private Partnerships. Results for Development Institute. <<http://www.educationinnovations.org/sites/default/files/DAG%20PPPs.pdf>>
- Clemons, J. (2013). A Few Tools for Continuous Improvement. Rethinking Automation. <<http://www.mavtechglobal.com/blog/2013/06/04/a-few-tools-for-continuous-improvement/>>
- Cournoyer, B. (2014). Global Investments in eLearning to Double by 2015. Brain Shark. <<http://www.brainshark.com/Ideas-Blog/2014/March/global-elearning-investments-to-double.aspx>>
- Dignan, A. (2013). The Operating Model That Is Eating the World. Medium. <<https://medium.com/@aarondignan/the-operating-model-that-is-eating-the-world-d9a3b82a5885>>
- Dixson, M. D. (2010). Creating Effective Student Engagement in Online Courses: What Do Students Find Engaging? Journal of the Scholarship of Teaching and Learning, Vol. 10, No. 2, June 2010, pp. 1 – 13. <https://www.iupui.edu/~josotl/archive/vol_10/no_2/v10n2dixson.pdf>
- Dream Box Learning. (2013). 6 Models of Blended Learning. <<http://www.dreambox.com/blog/6-models-blended-learning>>
- Eduventures, Inc.. (2014). Maximizing Investment in Online Learning. <<http://www.eduventures.com/7252-2/>>
- Ehlers, U. (2004). Quality in e-Learning from a Learner's Perspective. European Journal of Open, Distance, and E-Learning.
- Emmendorfer, J. (2009). Yes You Can! Teach Soft Skills With eLearning. AME-Learning Inc.
- Evans, D. (2013). eLearning Success – measuring the ROI impact and benefits. eLearning What's Next? <<http://www.theinformationdaily.com/2013/05/10/e-learning-success-measuring-the-roi-impact-and-benefits>>
- Farrell, G. Isaacs, S. (2007). Survey of ICT and Education in Africa: A Summary Report, Based on 53 Country Surveys. infoDev / World Bank. <http://www.infodiv.org/infodiv-files/resource/InfodivDocuments_353.pdf>
- Friedrich, J. (2010). E-Learning in Prison Education in Europe. LICOS. <<http://www.adam-europe.eu/prj/3840/prj/33-lc-recommendations-e-learning-prison-10.pdf>>
- Further Education Learning Technology Action Group (FELTAG). (2013). Paths Forward to a Digital Future for Further Education and Skills.
- G-Cube. (2014). Types of eLearning and What Suits Me Best. <<http://www.gc-solutions.net/resources/articles/types-of-e-learning-and-what-suits-me-best/>>
- Glencross, J. O'Hagan, S. (2014). Toward a Global Education Platform: Potential Models for Harnessing Technology to Promote Education as a Global Public Good. Global Business Coalition for Education.
- Goldin, Nicole (2015). Key Considerations in Youth Workforce Development. Center for Strategic and International Studies.
- Gutierrez, K. (2014). Getting Buy-In for eLearning: A 3-Step Process. SHIFT's eLearning Blog. <<http://info.shiftlearning.com/blog/bid/345991/Getting-Buy-In-for-eLearning-A-3-Step-Process>>
- Harrison, J.B. West, R.E. (2014). Sense of Community in a Blended Technology Integration Course: A Design-Based Research Study. The International Review of Research in Open and Distributed Learning. <<http://www.irrodl.org/index.php/irrodl/article/view/1907/3129>>
- Holzer, H., Lerman, R. (2007) America's Forgotten Middle Skills Jobs: Education and Training Requirements in the Next Decade and Beyond. Skills2Compete. http://www.urban.org/UploadedPDF/411633_forgottenjobs.pdf
- Islas, J. (2013). Digital Literacy and Academic Success in Online Education for Underprivileged Communities: The Prep@Net Case. The University of Texas at Austin. <<http://repositories.lib.utexas.edu>>

- bitstream/handle/2152/20948/LOPEZISLAS-DISSERTATION-2013.pdf?sequence=1>
- Investopedia (2015). Technical Skills. <http://www.investopedia.com/video/play/technical-skills/>
- Kerka, S. (2000). Incidental Learning. ERIC. <<http://www.calpro-online.org/eric/docs/tia00086.pdf>>
- Konetes, G. D. (2011). The Effects of Distance Education and Student Involvement in Incidental Learning. Indiana University of Pennsylvania. <<https://dspace.iup.edu/bitstream/handle/2069/477/George%20Konetes.pdf?sequence=1>>
- Kypreos, T. (2003). Building a Business Case for E-Learning. eLearn Magazine. <<http://elearnmag.acm.org/archive.cfm?aid=640563>>
- Langmead, S. (2013). Adaptive learning helps personalize instruction. eCampus News. <<http://adaptcourseware.com/docs/press/eCN-May2013.pdf>>
- Lebowitz, S. (2012). Adults Can Learn New Languages, Here's Why. Greatist. <<http://greatist.com/happiness/adults-can-learn-new-languages-heres-why>>
- Luo, M.A., Li, J., Subotić, S., Woodward, L. (2015). New Vision for Education: Unlocking the Potential of Technology. World Economic Forum. <http://youtheconomicopportunities.org/sites/default/files/uploads/resource/WEFUSA_NewVisionforEducation_Report2015.pdf>
- Lynch, M. M. (2001). Effective Student Preparation for Online Learning. The Technology Source Archives at the University of North Carolina.
- Macfadyen, L. Sorenson, P. (2010). Using LiMS (the Learner Interaction Monitoring System) to Track Online Learner Engagement and Evaluate Course Design. EDM. <http://educationaldatamining.org/EDM2010/uploads/proc/edm2010_submission_73.pdf>
- Medved, JP. (2014). Gamification vs. Game-Based Learning: What's the Difference? Capterra Training Technology Blog. <<http://blog.capterra.com/gamification-vs-games-based-learning/>>
- Mentis, M. (2008). Navigating the e-Learning Terrain: Aligning Technology, Pedagogy and Context. The Electronic Journal of e-Learning. Volume 6, Issue 3, pp. 217 – 226. Available online at www.ejel.org.
- Muuro, M.E. (2014). Students' Perceived Challenges in an Online Collaborative Learning Environment: A Case of Higher Learning Institutions in Nairobi, Kenya. The International Review of Research in Open and Distributed Learning. <<http://www.irrodl.org/index.php/irrodl/article/view/1768>>
- Olsen, D. (2013). The Challenge of Teaching Soft Skills. eLearning Industry. <<http://elearningindustry.com/the-challenge-of-teaching-soft-skills>>
- Rivas, K. 4 Reasons Why Learning a New Language Requires Immersion. Omniglot. <<http://www.omniglot.com/language/articles/languageimmersion.htm>>
- Rosenberg, H. (2013). Embracing the Use of Data for Continuous Program Improvement. Harvard Graduate School of Education. <<http://www.hfrp.org/publications-resources/browse-our-publications/embracing-the-use-of-data-for-continuous-program-improvement>>
- Sattler, B. (2015). LU Microsoft Partnership to Advance Professional Development Announced. Lamar University. <<http://www.lamar.edu/news-and-events/news/2015/01/lu-microsoft-partnership-to-advance-professional-development-announced.html>>
- Shneiderman, B. Kearsley, G. (1999). Engagement Theory: A Framework for Technology-Based Teaching and Learning. <<http://home.sprynet.com/~gkearsley/engage.htm>>
- Sitzmann, T. (2011). A Meta-Analytic Examination of the Instructional Effectiveness of Computer-Based Simulation Games. Personnel Psychology. <http://q2e.com/q2esite_v2/wp-content/uploads/2013/11/UColoradoMetaStudy.pdf>
- Strother, J. B. (2002). An Assessment of the Effectiveness of e-Learning in Corporate Training Programs. The International Review of Research in Open and Distributed Learning. <<http://www.irrodl.org/index.php/irrodl/article/view/83/160>>
- Tannou, M. Westerman, G. (2012). Governance: A Central Component of Successful Digital Transformation. MIT Center for Digital Business and Capgemini. <http://www.capgemini-consulting.com/resource-file-access/resource/pdf/Governance__A_Central_Component_of_Successful_Digital_Transformation.pdf>
- The World Bank. (2015). The STEP Skills Measurement Program. <<http://microdata.worldbank.org/index.php/catalog/step/about>>
- Tinio, V. L. (2013). Key Challenges in Integrating ICTs in Education. ICT in Education. <http://en.wikibooks.org/wiki/ICT_in_Education/Key_Challenges_in_Integrating ICTs_in_Education>
- Trucano, M. (2013). A few myths and misconceptions about digital teaching and learning materials in Africa. EduTech: A World Bank Blog on ICT Use in Education. <<http://blogs.worldbank.org/edutech/myths-digital-materials-africa>>
- Trucano, M. (2013). 10 Principles to Consider When Introducing ICTs into Remote, Low-Income Educational Environments. EduTech: A World Bank Blog on ICT Use in Education. <<http://blogs.worldbank.org/edutech/10-principles-consider-when-introducing-icts-remote-low-income-educational-environments>>
- Trucano, M. (2010). Worst Practice in ICT Use in Education. EduTech: A World Bank Blog on ICT Use in Education. <<http://blogs.worldbank.org/edutech/worst-practice>>
- Trucano, M. (2013). A Different Approach to Scaling Up Educational Technology Initiatives. EduTech: A World Bank Blog on ICT Use in Education. <<http://blogs.worldbank.org/edutech/scaling-up>>
- UNESCO. (2004). Integrating ICTs Into Education: Lessons Learned. ICT in Education. <<http://unesdoc.unesco.org/images/0013/001355/135562e.pdf>>
- Vanderbilt University. (2015). Teacher Professional Development Partnership with Coursera. <<http://vanderbilt.edu/digital-learning/teacher-pd.php>>
- Venable, M. A. (2011). Career Services and Online Colleges: Providing Critical Support to Online Students. OnlineCollege.org. <<http://www.onlinecollege.org/whitepapers/2011-08.pdf>>
- Waema, T. M. (2002). ICT Human Resource Development in Africa: Challenges and Strategies. African Technology Policy Studies Network. <http://www.atpsnet.org/Files/special_paper_series_10.pdf>
- Wagner, D. A. Day, B. James, T. Kozma, R. B. Miller, J. Unwin, T. (2005). Monitoring and Evaluation of ICT in Education Projects: A Handbook for Developing Countries. infoDev World Bank. <http://www.infodiv.org/infodiv-files/resource/InfodivDocuments_9.pdf>
- Wang, H. (2014). Enabling Technologies for Incidental Learning on the Web. EditLib. <<http://www.editlib.org/p/148923/>>
- Waters, J. K. (2014). The Great Adaptive Learning Experiment. Campus Technology. <<http://campustechnology.com/articles/2014/04/16/the-great-adaptive-learning-experiment.aspx>>
- Watson, T. (2015). Going Mobile in Sub-Saharan Africa To Save Lives – And Change the Future. Forbes. <<http://www.forbes.com/sites/tomwatson/2015/02/11/going-mobile-in-sub-saharan-africa-to-save-lives-and-change-the-future/>>
- Yai, Y. (2015). How College Value Impacts Alumni Giving. Eduventures, Inc.. <http://www.eduventures.com/2015/02/college-value-impacts-alumni-giving/#alumni>
- Yew, C. (2012). Kirkpatrick's Levels of Evaluation. Curriculum Innovation Research Center. <http://www.slideshare.net/cindyew/kirkpatrick-model-12612676>

About Accenture

Accenture is a global management consulting, technology services and outsourcing company, with more than 336,000 people serving clients in more than 120 countries. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments.

Through its **Skills to Succeed** corporate citizenship initiative, Accenture is equipping more than 3 million people around the world with the skills to get a job or build a business. The company generated net revenues of US\$30.0 billion for the fiscal year ended Aug. 31, 2014. Its home page is www.accenture.com

Acknowledgements

Project Lead and Author

Samantha Fisher

Lead Researcher

Anna Roumiantseva

Editors

Lisa Neuberger

Rosanne Williams

Contributors

Digital Learning Circle Members