How to Design and Scale Digital and Blended Learning Programs to Improve Employment and Entrepreneurship Outcomes
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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.

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
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Accenture

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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 | 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

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 | Some organizations can additionally choose to validate learning for the program as a whole, not just the digital learning portion

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 |
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.

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** | • Target Strategic Impact  
• Quantify and Present the Case | **5. Engage Stakeholders and Capture Value from Digital Learning**  
• Design Methods for Imparting Content  
• Overcome Barriers to Accessibility  
• Enable Trainers  
• Validate Learning  
• Motivate Learners  
• Develop Supportive Alumni |
| **2. Design Effective Educational Content** | • 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 | |
| **3. Build a Scalable Operation** | • Partner Across the Workforce Development Ecosystem  
• Design the Detailed Digital Learning Operating Model  
• Select Supporting Technology | |
| **4. Execute the Program** | • Design and Execute the Pilot  
• Roll Out the Full-scale Program | |
| **5. Engage Stakeholders and Capture Value from Digital Learning**  
• Define, Understand, and Measure Program Performance  
• Manage Change | |
| **6. Continuous Improvement** | • Continuously Improve | |
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
- 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.
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.

### 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
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.

Steps to Achieve

Make a long-term commitment to digital learning

According to one study sponsored by the Alliance for Higher Education Competitiveness, which pulled from the experiences of 21 institutions to synthesize best practices for achieving success in online learning, 91% cited administrators and faculty being clear that internet-supported learning is a long term commitment as a success factor. (Abel, 2005) This is in line with our findings from the Virtual Roundtable 2014, in which Skills to Succeed practitioners noted that digital learning programs required a long term commitment (three to five years) in order to see the value for the organization and impact to the mission.

Ensure digital learning is aligned to the organizational strategy and communicate the strategy

According that same study, 64% cited aligning digital learning with the overall strategy as a primary success factor. (Abel, 2005) Organizations successfully do this in different ways depending on the organization's mandate and mission.

Quantify the Business Case

• Make a long-term commitment to Digital Learning
• Ensure digital learning is aligned your strategy and communicate the strategy
  - Complement and improve existing program offering
  - Drive growth and scale
  - Differentiate the organization
  - Define the organization

• Identify the value drivers of introducing digital learning to the organization
• Consolidate these findings into a business case to project net impact for the organization
• Examine potential risks

Present the Business Case

• Create an outline for the business case summary
• Review the purpose of the business case
• Analyze the audience
• Develop the story line
• Present figures in a compelling way
• Create the summary report
Options include:

• **Complement and improve existing program offering:** For most large or established organizations starting out with digital learning, digital becomes a good complement to an existing program or an extension of a new program offering. Though educating, training and upskilling might not be the primary function of these organizations, they can use the introduction of digital learning to improve their ability to serve their mission through improved educational products and services. These organizations might incorporate digital learning into their portfolio of services one program at a time. They need to focus on getting full programs online, rather than single courses, as this greatly increases the chance of achieving "overwhelming success" of the program by a four-to-one margin. (Abel, 2005). Though digital learning may not be the primary activity of the organization, they need to make sure it has sufficient attention and resources to be successful, as an unsuccessful pilot can impede eventual adoption of digital learning throughout the organization.

• **Drive growth and scale:** Organizations can leverage digital learning as an engine of growth to more quickly serve new beneficiaries/locations, or provide more and better services to existing beneficiaries. Growth to new areas (locations, types of beneficiaries, etc) can be achieved quickly through partnerships with other organizations, or over time as part of "bootstrapped" growth.

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**Case Study**

Upwardly Global is an organization with robust growth goals of 33% growth year-over-year for the next five years. Digital is one method that will drive that goal in three ways:

- **"Bootstrap" market development:** Upwardly Global promotes an online platform in advance of opening a new office so they have clients on the ground even before an office opens up, thus establishing demand in that market and taking some of the guesswork out of office location selection.

- **Partnership-driven diversification:** They are building a platform to share with other partner organizations, who will staff and run the program. This allows the partner organizations and Upwardly Global to reach more new beneficiaries faster.

- **Product development:** Completion numbers have been driven up by using a blended model to make it easier for students to complete a program that has a more manageable amount of in-person time required. They have also expanded their service offering by adding additional digital training to their curriculum through Accenture and Skillsoft®.

**Differentiate the organization:** With multiple service providers serving the same beneficiary groups in some locations, digital learning can be leveraged to set apart some service delivery models from others by filling gaps in need, resulting in greater adoption by delivery partners and learners alike.

**Define the organization:** With the increasing maturity of digital learning products and offerings in the workforce development space, organizations dedicated to operating digitally to serve these beneficiaries continue to emerge.

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**Case Study**

By integrating digital learning into the overall strategy, The East London Business Alliance (ELBA) has been able to set itself apart from other employability charities. Digital has helped them scale in order to reach a much greater number of stakeholders, which has acted as a differentiating factor for the organization (for both learners and partner organizations). This has helped in accessing program funding. It has also allowed them to appeal to learners by letting them access the material in more engaging ways (more game-like).

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**Video Transcript: Making the Case for Digital Learning, Tadd Wamester**
Quantify and Present the Case for Digital Learning

Articulating a clear and tangible business case for digital learning that demonstrates the expected value to the organization is critical to securing buy-in and funding. Program success can then be tracked to business case milestones to ensure value from the program is realized.

Steps to Achieve

Identify the value drivers of introducing digital learning to the organization

The benefits of digital learning can manifest themselves in improved efficiency, effectiveness and/or productivity for the organization:

<table>
<thead>
<tr>
<th>Costs</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency</td>
<td>↓ Lower = Equal</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>= Equal ↑ Better</td>
</tr>
<tr>
<td>Productivity</td>
<td>↓ Lower ↑ Better</td>
</tr>
</tbody>
</table>

It is critical for organizations with digital learning programs to identify the value drivers that will lead to these benefits in order to demonstrate the case for digital learning and secure the necessary support and funding (Tata Interactive Systems, 2013).

To create a compelling business case, value drivers must be linked to tangible metrics whenever possible in order to better quantify projections for the digital learning program’s impact on the organization. The impact of digital learning on each of these metrics must then be forecast to understand what the effect will be.

The business case tool can be used as a starting point to quantify these value drivers (click here for more information).

In an effort to demonstrate tangible impact for the program, quantifiable value drivers form the core of the business case. However, some value drivers relevant to digital learning are more difficult to link to concrete program metrics and quantify. Due to the less direct link between these drivers and quantifiable program impacts, they generally serve to enhance the business case. Examples can be found in the business case tool.

Consolidate these findings into a business case to project net impact for the organization

At the core of the business case is the return on investment (ROI) projection for the digital learning program – the projected net benefit that the organization will reap as a result of the investment it makes. The identified value drivers and cost drivers above must therefore be analyzed in tandem to arrive at a projected ROI metric for the program.

\[
\text{ROI} = \frac{\text{Gain from Investment} - \text{Cost of Investment}}{\text{Cost of Investment}}
\]

Generally it takes more than one year to break even and start reaping the benefits of investment in digital learning, so ROI is generally measured over a three to five year period (Smolen, 2009). In a survey of eLearning Guild members, 48% reported a positive ROI on their digital learning initiatives, while 15% reported a negative ROI or did not choose to respond.

Examine potential risks

As with any investment, there are some risks associated with digital learning which must be analyzed and included in the business case for transparency. The level of risk needs to be baked into the business case assumptions (the higher the risk, the more conservative the business case estimates).
Figure 1: Digital Learning Value Driver Overview

Mission-Related Value:
- Number of beneficiaries reached
- Diversity of beneficiaries reached
- Content quality
- Learner engagement
- Learner job search success
- Ancillary learning opportunities
- Flexibility of learner support
- Extent of ongoing alumni support
- Content development partner collaboration
- Content delivery partner collaboration
- Funding sources
- Revenue per beneficiary
- Instructor cost per beneficiary
- Content creation and maintenance cost
- Capital costs
- Program support system cost

Operational Value:
- Program tracking quality and speed
- Learner outcomes
- Collaboration with program partners
- Program funding
- Program costs
- Learner support
- Customization of content to learner context, needs, learning style, and skill level
- Immediacy of feedback
- Practical learning application opportunities
- Self-directed learning
- Consistency of content delivery across delivery modes
- Content update frequency
- Public-private funding mix
- Geographic constraints on funding
- Salary costs
- Training and support costs
- Instructor-to-student ratio
- Buildings/facilities
- Equipment

Financial Value:
- Program reach and scalability
- Learner outcomes
- Program tracking quality and speed
- Collaboration with program partners
- Program funding
- Program costs
- Learner support
- Increased Program Value Due to Digital Learning
- Mission-Related Value
- Operational Value
- Financial Value

Contents
How-To Methodology
Section 1: Make the case for Digital Learning
Section 2: Design Effective Educational Content
Section 3: Build a Scalable Operation
Section 4: Execute the Program
Section 5: Engage Stakeholders and Capture Value
Section 6: Continuous Improvement for Digital Learning Programs
Toolkit
Risks can be mitigated through involving field experts and partners in providing guidance, expertise and manpower, but not eliminated altogether.

- Learning curve risk: In a survey of eLearning Guild™ members, only 10% reported success on their first try. Approximately 35% needed more than six courses/events to develop proficiency with digital learning and start producing top-level results. (Smolen, 2009). The sharing of best practices helps minimize this risk but doesn’t eliminate it altogether.

- Buy-in risk: Buy-in from organizational stakeholders, leadership and key influencers should be made a priority from the start, as the lack of buy-in can have a major impact on program results.

**Present a clear case**

Communicating the projected impact of the digital learning program to the organization and its stakeholders is no less important than determining that impact. It ensures that project sponsors, funders and other key players bought in to the scope and repercussions of the project.

- Create a succinct outline for the business case summary: This “snapshot” includes a brief description of the organization’s situation, a short overview of the project, an explanation of key value drivers and assumptions and the overall conclusions regarding projected project impact.

- Answer the key question: how much better (or worse) off will the organization be as a result of the digital learning project?

- Cater to the audience: Plan the presentation to address the business case audience’s preferred style of communication and each decision-maker’s over-riding concerns:
  - The economic decision-maker (e.g. the funder)
  - The operational sponsor
  - The gatekeeper.

- Develop the story line: Set the context of why the project is necessary, explain what it will accomplish and demonstrate the impact it will generate. Key messages need to be developed and presented with research and supporting facts to back them up in order to be convincing.

- Present figures in a compelling way: Succinctly summarize facts and figures in ways that are easy to understand for someone who has less background with the details of the digital learning program. Compelling visual graphs are usually an effective way to do this. Make sure to keep track of all the source data and have it as back-up in case there are questions asked about the details.
SECTION 2
Design Effective Educational Content
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.

1. Make the Case for Digital Learning
2. Design Effective Educational Content
3. Build a Scalable Operation
4. Execute the Program
5. Engage Stakeholders and Capture Value from Digital Learning
6. Continuously Improve

Serve Beneficiary Groups
- Determine if your beneficiaries are immediately suited for digital learning
- Prepare those beneficiaries not immediately suited for digital learning (offline or online approach)
- Match the digital learning program structure to beneficiary needs based on their learner segment

Inform Content with Market Demand
- Conduct secondary research to identify areas of demand
- Identify stakeholders to consult, including industry groups, employers, schools, charities, etc.
- Understand what jobs have a demand for trained beneficiaries
- Identify skills and competencies needed to be hired for the in-demand jobs
- Identify how employers can be involved with connecting students to real-world experiences
- Determine which skills and competencies should be delivered digitally

Use Digital to Train Different Skills
- Select the program structure that is best aligned to the type of skills you are teaching digitally

Determine % of Blend
- Examine your beneficiaries’ learner profiles to determine the optimal blend of online delivery
- Match the beneficiary needs in terms of online vs. offline delivery mix with the program’s cost considerations
- Analyze the impact of incidental learning

Asynchronous vs. Synchronous
- Align delivery timing with program structure, skills being taught, and beneficiary needs
- Put in place an appropriate support structure to guide learners through the course
### Customize vs. Industrialize

- Align the language and culture of your digital learning program to your beneficiary group and program goals
- Define the most appropriate customization level for the program (no customization, customized classroom component, curation of digital curriculum, customization for different beneficiary groups, customized platform)

### Designing Methods for Imparting Content

- Adaptive Learning
  - Align your organization around the need for adaptive learning
  - Define the program areas where adaptive learning will be most beneficial
  - Choose the technology solution best suited to your program goals
- Content delivery through games and scenarios
  - Determine which portions of your program would benefit the most from game- and/or scenario-based content
  - Design your scenario- and game-based learning elements in a way that will allow you to maximize their effectiveness
  - Design your scenario- and game-based learning elements in a way that will allow you to maximize their efficiency
- Social Learning
  - Determine importance of a social learning platform based on the beneficiaries’ profile
  - Integrate the social learning platform into your digital learning program to maximize its benefits
  - Examine how to leverage the platform to facilitate collaboration among instructors

### Overcome Barriers to Accessibility

- Ensure that learners can connect to participate in the program
- Determine which device types are best suited to the program

### Enable Trainers

- Determine pedagogical approach trainer will need to adopt, based on the beneficiaries
- Prepare trainers for their new role
- Support trainers and create buy-in for digital learning

### Validate Learning

- Measure course completion
- Verify acquisition of skills post-training
- Measure relative improvement in skills
- Provide certifications or badges

### Motivate Learners

- Set advance expectations for what learners will get out of the program
- Keep learners engaged in the content
- Provide recognition and rewards

### Develop Supportive Alumni

- Keep track of alumni
- Provide on-going alumni support
- Turn alumni into program advocates
Serve Beneficiary Groups with Digital Learning

Steps to Achieve

Determine if beneficiaries are immediately suited for digital learning

Experience has shown that a set of characteristics determines whether learners are likely to be successful in a digital learning environment immediately or whether they require additional preparation beforehand. Characteristics of beneficiaries more immediately suited to digital learning:

- Familiarity with technology and basic technology skills
- Reading and writing proficiency (in language of instruction)
- Ability to work independently (strong time management/project management skills)
- Motivation to learn
- Willingness to ask for help (awareness and high emotional quotient)
- Cognitive Engagement (click here for more information)
- Young age (ability/speed to become digitally literate).

If the beneficiaries fulfill all or most of the above criteria, they are more likely to be suited to partake in a digital learning program.

The Spanish Red Cross has been using a diagnostic test/simulation to assess beneficiaries’ competency level. It has allowed the beneficiaries to understand their capabilities and knowledge gaps better while allowing the organization to gauge the level of support they need to provide each beneficiary prior to/during the training program. While the test can theoretically be administered online, the organization has found that it is more useful with their beneficiary population to conduct it with the support of a facilitator.

Prepare those beneficiaries not immediately suited for digital learning

It is advised to prepare those beneficiaries not immediately suited for digital learning through a preparatory course. This allows them to get familiar with the technology tools employed in digital learning in an environment that allows for interaction between the student and instructor (Lynch, M. M., 2001).

The percent of online course delivery for this introductory course can vary, ranging from fully online to fully offline. As a guiding principle, however, the preparatory course delivery should ideally simulate the online/offline environment that learners will need to navigate in the subsequent digital learning courses taken as part of the program.

With the fully online approach, M.M. Lynch described strong results that can be expected, including an increase in learners’ technical proficiency (89% of students) and some that might be less expected, such as reduced learner attrition rate in subsequent digital learning courses and increased re-enrollment (90% of students) following results can be expected (M.M. Lynch):

A fully offline approach can also be taken. The Spanish Red Cross has found that offering an in-person training module in their employability skills program prior to starting learners on a digital training curriculum has been successful for beneficiaries lacking basic digital skills.

The extra preparation required for these beneficiaries before starting the full-scale digital learning program does it more expensive to serve them than those more immediately suited to digital learning. As such, the cost to serve of the two groups should be looked at separately to get an accurate picture of program metrics.

Match the digital learning program structure to beneficiary needs based on their learner segment

For a digital learning program to be effective, it needs to define the appropriate program structure to meet learner requirements in terms of background, learning preferences and social needs in. Program success is not only defined by program quality or structure but also largely by the quality of the match between the program and the learner’s needs. Based on evaluation along thirty dimensions, the four main segments that learners fall into are the following (Ehlers, 2004):

The Individualist
Prefers self-directed learning; is content-focused; is not interested in interacting with fellow learners/tutors/instructors

The Results-Oriented
Seeks learning that is integrated with work and oriented towards instrumental purposes (practical learning)

The Pragmatic
Oriented towards personal learning needs; seeks information/advice/tutor support as required

The Avant-Gardist
Interested in interactive and rich didactic solutions to learning
Inform Content with Market Demand

Steps to Achieve

• Conduct secondary research to identify areas of demand
• Identify stakeholders to consult, including industry groups, employers, schools, charities, etc.
• Understand what jobs have a demand for trained beneficiaries
• Identify skills and competencies needed to be hired for the in-demand jobs
• Identify how employers can be involved in connecting students to real-world experiences
• Determine which skills and competencies should be delivered digitally.

Involving employers in course creation is paramount in ensuring content relevance and employability of learners, in digital learning as much as in traditional classroom learning. Steps to involve employers are generally applicable to all workforce development programs, but digital learning does present some unique requirements and opportunities.

• More easily shared content: Young people completing Accenture’s Skills to Succeed Academy have commented that their learning benefits as a result of the wide range of perspectives from employers that they have access to through the digital content. Digital learning enables employers to share that input more easily. As employers have largely shifted their workforce training programs online (42% of Fortune 500 companies have done so to-date), their ability to share digital content has become greater than the non-digital equivalent (Gutierrez, 2014).

“Real-world” experience through the digital learning platform: A key area where digital learning can open up incredible opportunities for a subset of learners is the ability to connect students to real-world examples, case studies and project-based work provided by employer partners – partners across geographical barriers. This allows them to not only apply their knowledge to real-world scenarios and deepen their learning of key in-demand skills but to also grow their network and expose them to potential job opportunities post-training (Jain, 2013). This has been linked with higher level of learner satisfaction and engagement (Kearsley, Shneiderman; 1999).

Case Study

An example of demand-informed digital learning content is the “Nanodegree” program launched by Udacity, Inc. in 2014 in partnership with AT&T, Inc., with the slogan of “credentials built and recognized by industry leaders to advance your career”. Participants learn by completing a series of real-world online projects developed jointly with subject matter experts and hiring managers at employer companies – either immediately if they have the skills necessary to complete them, or by first completing online courses along the way to fill any knowledge gaps.

Upon the completion of each project they earn a project badge. Since projects build on each other, at the end of the “nanodegree” learners have a portfolio of project badges that demonstrate to employers that they are job-ready. Employers who collaborate in developing the program curriculum also become key internship providers for learners upon completion of the program. AT&T has committed to offering 100 paid internship spots to program graduates this year, with a number of other employers like Autodesk and Cloudera planning to follow suit after the program’s inauguration year is complete.

The digital learning medium can make it easier for employers to be involved in programs due to content being more easily shared digitally and the possibility to provide “real-world” experience through the digital learning platform.

Case Study

Coursolve, Inc. is now partnering with a number of educational institutions, including The University of Virginia, The University of Washington and the Massachusetts Institute of Technology to offer “digital internships”. While internships have long been recognized as an effective way to transition students from learning environment to the workplace, they have been difficult to scale. With the introduction of digital learning this is rapidly changing.

Coursolve, Inc. provides an online platform where learners solve real-world challenges posted by alumni and employers, applying skills learned from coursework. Employers, in turn, provide feedback, job recommendations and sometimes make employment offers upon project completion, thereby improving the program’s job outcomes for learners.

Digital learning can be effective across a broad range of skill types. The key question is not which type of skill, but rather how each type of skill can be taught effectively digitally.
Use Digital to Train Different Skills

Steps to Achieve

Select the program structure that is best aligned to the type of skills you are teaching digitally.

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

An article in “The IUP Journal of Soft Skills” by Adams (2010), describes two main structures to be considered as part of this design process: the “First Generation” and “Second Generation” Models. The First Generation model has content taught in a more linear way, is more based on repetitive memorization and is typically ideal for technical skills development or learning of routinized tasks. The Second Generation model is taught with the learner having more control over the learning path, is more based on reflective practice and is typically ideal for employability skills development. It is worth noting that this type of model, while effective, can sometimes have significant costs associated – a cost-benefit analysis needs to be done to determine whether it is the most optimal approach in a given context relative to a more hands-on alternative. Please see the source for more detailed information.

See Figure 3 for an overview of the key domains where Accenture’s Skills to Succeed partner organizations currently leverage digital learning. Other skills taught digitally by some of Accenture’s Skills to Succeed partners include life skills, math and literacy skills, etc. Many of these organizations then leverage the in-person portion of their programs to provide learners the opportunity to practice and reinforce what they’ve learned online.

Figure 3: % Digitally Training Which Skills

<table>
<thead>
<tr>
<th>Skill Type</th>
<th>% of Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employability</td>
<td>92%</td>
</tr>
<tr>
<td>Technical/Industry</td>
<td>48%</td>
</tr>
<tr>
<td>Digital</td>
<td>44%</td>
</tr>
<tr>
<td>Language</td>
<td>36%</td>
</tr>
</tbody>
</table>

See Figure 3 for an overview of the key domains where Accenture’s Skills to Succeed partner organizations currently leverage digital learning. Other skills taught digitally by some of Accenture’s Skills to Succeed partners include life skills, math and literacy skills, etc. Many of these organizations then leverage the in-person portion of their programs to provide learners the opportunity to practice and reinforce what they’ve learned online.
Determine Percent of Blend

Between the traditional fully face-to-face learning model and the fully online model, there is a range of “blended learning” models possible with a mix of the two mediums. The most cited framework is that by the blended learning framework produced by the Clayton Christensen Institute. Please see their website for more information about their framework. (Clayton Christensen Institute, 2012).

Steps to Achieve

Examine the beneficiaries’ learner profiles to determine the optimal blend of online delivery

Recent research has shown that each of these blended learning models is best suited to a specific type of learner and should therefore be selected as a function of the beneficiaries that a digital program serves. Programs working with underprivileged or at-risk learners have had particular success with the Flex Model (Dream Box Learning, Inc 2013).

The right model for a program is a function of the beneficiary needs, cost considerations and desired level of incidental learning. The “Flex” model, with a minimum of 30% online delivery, is effective for delivering content to at-risk learners.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Learner Profile Best Aligned To</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotation</td>
<td>A course or subject in which students rotate on a fixed schedule or at the teacher’s discretion between learning modalities, at least one of which is online learning.</td>
<td>Standard classroom setting</td>
</tr>
<tr>
<td></td>
<td>• Station rotation: happens within a contained classroom or group of classrooms and students rotate through all of the stations (not only those on their custom schedules)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Lab rotation: students rotate to a computer lab for the online-learning station</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Flipped classroom: learning happens online at home, with homework/practice occurring in the classroom</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Individual rotation: each student has an individualized playlist and does not necessarily rotate to each available station or modality</td>
<td></td>
</tr>
<tr>
<td>Flex</td>
<td>A course or subject in which online learning is the backbone of student learning, even if it directs students to offline activities at times. Students move on an individually customized, fluid schedule among learning modalities and check in with instructor as they need to.</td>
<td>Non-traditional or at-risk learners</td>
</tr>
<tr>
<td>A La Carte</td>
<td>A course that a student takes entirely online to accompany other experiences that the student is having at a brick-and-mortar school or learning center. The teacher of record for the A La Carte course is the online teacher.</td>
<td>Motivated, self-directed learners</td>
</tr>
<tr>
<td>Enriched Virtual</td>
<td>A course or subject in which students have required face-to-face learning sessions with their teacher of record and then are free to complete their remaining coursework remote from the face-to-face teacher. Online learning is the backbone of student learning when the students are located remotely. The same person generally serves as both the online and face-to-face teacher.</td>
<td>Independent learners requiring flexibility</td>
</tr>
</tbody>
</table>

Sources:
http://www.christenseninstitute.org/blended-learning-definitions-and-models/
http://www.dreambox.com/blog/6-models-blended-learning
HP LIFE (an organization within Hewlett-Packard Development Company) has found that a blended model with in-person instruction and digitally-delivered practice exercises (enriched virtual model) was the most effective form of instruction to delivering benefits like improved learner self-confidence and communication skills. However, based on research evidence these beneficiaries must generally be independent learners to succeed in this type of model. For those learners that are less independent, Conexão has found that offering digital learning in a lab/group setting has led to superior results. KIPP offers rotational model learning in labs to its elementary school students who, by function of their age, are unable to be totally independent learners.

Additionally, the sequence of the online vs. offline program components can sometimes be more important than the % mix of the two media itself. For instance, Upwardly Global has found that content delivery can be more effective if the program cycles between digital delivery and classroom reinforcement.

**Match the beneficiary needs in terms of online vs. offline delivery mix with the program’s outcome and cost considerations**

A recent survey done by Accenture of 30 Skills to Succeed practitioner organizations using digital learning found that a program’s scale or employment outcomes was not shown to correlate with the mix of online vs. offline delivery. Rather, the online vs. offline mix was directly related to program cost (higher classroom delivery percentage meant higher program cost). As such, once a program has chosen the blended model best suited to its learners’ profile, maximizing the percent of online content could help minimize costs (Accenture, 2014).

**Analyze the impact on incidental learning**

An additional element to consider when comparing online and in-person learning is incidental learning – something that is often overlooked. Unlike planned curricular learning, which has specific goals associated with it and happens through a relatively structured process, incidental learning is unintentional and occurs as a by-product of the experience of taking the course of study. Online learning environments cannot replicate the incidental learning benefits of in-person learning environments and vice versa. Incidental learning that takes place in in-person environments is more interpersonal in nature, such as social networking, team work and cultural awareness. Incidental learning that takes place in online environments is more around managing successfully through the content with skills such as problem solving and self-discipline. (Konets, 2011). Please see the source for additional detail.

The online medium does provide some opportunities to reap the benefits of incidental learning through social interaction platforms and self-directed online browsing (Kerka, 2000; Wang, 2014). However, the results are generally still inferior to those of in-person learning, which serves as a compelling argument for a more blended digital learning program structure rather than the fully online alternative.
Deliver Content  
Synchronously vs. Asynchronously

Synchronous learning is learning that all participants partake in at the same time. Synchronous learning is free of the constraints of place, with the ability to be delivered virtually to geographically dispersed participants through formats such as a live webinar, but is still constrained by the element of time. Conversely, asynchronous learning is learning that happens outside the constraints of both time and place. Examples include podcasts, pre-recorded webinars, or any online game or training that does not need to be taken at a specific time. It allows learners to consume content when and where it is most convenient for them. This brings an added level of flexibility for beneficiaries, with a recent study of adult learners reporting that the top reason for going back to school was the availability of asynchronous learning that could be completed at their own pace when they had the time. (Eduventures, Inc., 2014)

Picking synchronous or asynchronous program delivery largely depends on the level of support that beneficiaries need, as well as the program structure and skills being taught.

Steps to Achieve
Align delivery timing with program structure, skills being taught and beneficiary needs

The best-practice recommendations in terms of aligning delivery timing with program needs generally converge towards the following (G-Cube, 2014):

<table>
<thead>
<tr>
<th>Synchronous</th>
<th>Asynchronous</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Learners requiring extensive support</td>
<td>• Independent learners needing less support</td>
</tr>
<tr>
<td>• Learners with limited technical skills</td>
<td>• Technically proficient learners</td>
</tr>
<tr>
<td>• Learners with stable schedules</td>
<td>• Learners with schedule limitations (e.g. working, have a family)</td>
</tr>
<tr>
<td>• Uniform learner capability levels</td>
<td>• Varying learner capability levels</td>
</tr>
<tr>
<td>• Regular access to a classroom and/or sufficient internet bandwidth to support a virtual classroom</td>
<td>• Limited access to a classroom and/or insufficient internet bandwidth to support a virtual classroom (i.e. content must be accessed when the learner is able to get to a location with appropriate connectivity)</td>
</tr>
<tr>
<td>• Employability training focus</td>
<td>• Technical skills training focus</td>
</tr>
<tr>
<td>• Short training shelf life</td>
<td>• Long training shelf life</td>
</tr>
</tbody>
</table>

Case Study
A mix of synchronous and asynchronous delivery has also been shown to work. IVMF has successfully leveraged synchronous digital delivery as a complement to the asynchronous program elements, such as offering synchronous online guest speaker sessions as a complement to asynchronously taught learning modules on a related topic. The synchronous sessions allow learners to interact with one another and with the speaker during the sessions and ask clarifying questions in real-time, which deepens their understanding of the topic. As an added benefit, this synchronous content is then recorded and added to the archives of reference materials that learners can access at a later time asynchronously.

Put in place an appropriate support structure to guide learners through the course

Based on Accenture Open Education’s experience, structuring (“scaffolding”) the asynchronous program for learners has led to superior learner outcomes compared to letting them fully self-pace. Setting weekly completion targets and providing additional training elements upon reaching each target (e.g. coaching sessions) has given learners the flexibility they needed while providing a support structure to help them succeed. Another example of an organization that has had success with this approach is Upwardly Global. Its digital platform lets the instructor know when a learner has accessed the training that was allocated to them, allowing them to follow up and provide additional support at logical points throughout the program (one-on-one or in a group format).

Providing recognition and/or rewards for learners when they reach important training milestones has also proven to be a successful strategy when structuring self-paced programs.
Customize vs. Industrialize Digital Content

Steps to Achieve

Align the language and culture of the digital learning program to the beneficiary group and program goals

An estimated 80% of online content is in English, which represents a major barrier for maximizing the educational benefits of Internet-enabled training for beneficiaries who do not understand English (Tinio, 2013). Customizing digital learning materials to be in the language that beneficiaries are comfortable in is generally a minimum level of customization required for effective programs.

Digital allows for the customization needed to adapt content to new cultures, languages or beneficiary needs in a scalable way that is not possible in a purely classroom-based program. However, customization is a delicate balance of cost vs. applicability.

While straight translation may be necessary, cultural relevance is also imperative for program success (Glencross, O’Hagan; 2014) and is an important factor for programs to consider when they scale across geographical borders. The concept of culturally relevant teaching (CRT) pedagogy emerged based on research findings that students who did not see themselves or their culture represented in their learning content were more at risk for academic failure. Conversely, designing the content to be relevant to learners’ environments was shown to improve their understanding, increase their engagement and help them develop confidence as learners (Carlson, 2015). Furthermore, this customization seems to be especially critical for some types of content and skill types to maximize learner results. IVMF, for instance, has found that it is especially important to customize employability skills training – to understand each beneficiary and tailor the content according to his/her profile to maximize learning outcomes.

Determine the most appropriate customization level for the program

Customization can take many forms, in order of scalability in the context of digital learning.

**No customization (fully standardized)**

The program is not altered in any way, regardless of the beneficiary audience. Both the classroom component (if any) and online experience are identical for every learner. This is the option that gives the learning program the greatest scalability, but it does not lead to the best learner results. Learner language and unique cultural context, perception that the delivery partner’s organizational mission is too “unique” to use standard content and the perception that standardization is akin to program inflexibility are some of the most common arguments for a greater level of program customization.

**Customization of classroom component**

The content that learners are exposed to in the classroom vary by group or individual beneficiary – this can take the form of a modified focus area of the core content or of the readings, examples, videos and exercises that are used in the classroom to reinforce the core 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.
Doing a pre-program competency assessment for learners is necessary for this approach to be possible; it allows the program to evaluate learners’ capability levels and learning needs in order to be able to recommend a relevant customized curriculum for beneficiaries. Where digital content is being integrated into an existing program, it is important to map it against the existing curriculum and adapt it as needed to ensure coherence (Trucano, 2013).

Customization of digital material content for different beneficiary groups

In this option, the digital 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 context, 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

In this approach, not only is the course content different depending on the beneficiary group or individual beneficiary, but the entire delivery platform changes as well. 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 programs wishing to scale while keeping costs and complexity down, it is generally not the optimal option.

Design Methods for Imparting Content Through Digital Learning

In all sectors that move from the physical realm into the digital realm, the most common initial form is to translate the medium but not fundamentally change the model. The first step tends to be creating a “digital catalogue”; the second step tends to be providing a common service or interaction online. These two steps correspond to the most common forms of digital learning – the physical classroom in digital form and static assessment-based content. Static learning content can have the advantage of making the same kind of content that would be available in the classroom more accessible to a wider audience in a standard way. However, taking full advantage of what the digital medium has to offer generally involves shifting further to the right on the maturity continuum, transitioning towards dynamic learning delivery models. The additional effectiveness that comes with dynamic learning does come at a somewhat increased cost for content development and revision. This cost needs to be analyzed in the context of a given beneficiary group to determine which content is the most effective option for the most realistic cost.

**Figure 5: Maturity Spectrum of Digital Learning Content**

<table>
<thead>
<tr>
<th>Static Learning</th>
<th>Dynamic Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Classroom in Digital Form</strong></td>
<td><strong>Static Assessment-Based</strong></td>
</tr>
<tr>
<td>Provides standard classroom lectures through a multi-media digital medium without making significant changes to teaching pedagogy</td>
<td>Provides standard classroom lectures through digital medium, and tests end user for acquired competencies, generally through multiple choice tests</td>
</tr>
<tr>
<td><strong>Examples:</strong></td>
<td><strong>Examples:</strong></td>
</tr>
<tr>
<td>Video Lectures</td>
<td>Online slide presentation or video with culminating quiz</td>
</tr>
<tr>
<td>Online presentations/webinars</td>
<td>Game to “win” points for completion</td>
</tr>
<tr>
<td><strong>Advantages over non-digital:</strong></td>
<td><strong>Advantages over non-digital:</strong></td>
</tr>
<tr>
<td>Accessibility</td>
<td>Standardized certification</td>
</tr>
<tr>
<td>% Learning Circle Partners: 100%</td>
<td>63%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Adaptive</strong></th>
<th><strong>Scenario-Based / Gamification</strong></th>
<th><strong>Social</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Similar to Static-Assessment-Based, but chooses quiz questions and content based on the previous answers and quiz performance to match the needs of the learner</td>
<td>Provides a variety of problems, puzzles, or games that the learner must solve. Successful solving indicates learning of the material</td>
<td>Provides real-time feedback during courses through chat windows or question/answer sessions. Leverages social technology to create study and discussion groups</td>
</tr>
<tr>
<td><strong>Examples:</strong></td>
<td><strong>Examples:</strong></td>
<td><strong>Examples:</strong></td>
</tr>
<tr>
<td>Skills to Succeed Academy</td>
<td>GMAT</td>
<td>IVMF</td>
</tr>
<tr>
<td><strong>Advantages over non-digital:</strong></td>
<td><strong>Advantages over non-digital:</strong></td>
<td><strong>Advantages over non-digital:</strong></td>
</tr>
<tr>
<td>Efficient use of time and resources to deliver content most needed by the learner, bringing them to proficiency regardless of starting level competency</td>
<td>Opportunity to apply learning through practice and get rapid feedback</td>
<td>Increased learner engagement</td>
</tr>
<tr>
<td>Nuanced understanding of skills imparted</td>
<td>Interactive and engaging</td>
<td>Increased effectiveness and lower dropout rate</td>
</tr>
<tr>
<td>% Learning Circle Partners: 50%</td>
<td>38%</td>
<td>38%</td>
</tr>
</tbody>
</table>

**Content Maturity**
Dynamic digital learning content (i.e., adaptive, gamified/games-based, or social) is better at leveraging the unique capabilities of the digital format to improve efficiency and effectiveness of training than the more popularly adopted static learning content. It can, however, be more costly to implement.

We will examine steps to achieve the three dynamic content models: adaptive learning, scenario-based/gamification and social learning.

Adaptive Learning

Adaptive learning leverages advanced technology to deliver personalized learning at scale. The ability to create program content that is not only customized for each learner, but also adaptive to that learner’s performance, is a key advantage and distinguishing factor digital learning has over traditional classroom learning. The concept of “desirable difficulty” states that there is a “sweet spot” range of difficulty for learning content – content outside this range is perceived by the learner to be either too easy or impossibly difficult, causing the learner to lose engagement. The challenge is that this range is different for every learner (Knowledge Factor, Inc., 2015). Adaptive learning allows digital learning programs to find this “sweet spot”, reinforcing areas that a given learner is struggling with while letting him/her quickly progress through those he/she has grasped. In other words, adaptive learning allows beneficiaries to “study smarter, not longer” and stay engaged (Langmead, 2013).

Adaptive learning also provides a large amount of data to program operators and instructors on the back end – data on which content areas learners generally find difficult versus easy to grasp. This enables targeted future content modifications for the more problematic areas in order to make the material easier to grasp. It also provides a way for blended learning programs to understand which content areas to focus on in the in-person part of the programs to maximize learner comprehension (Langmead, 2013). A recent report by the World Economic Forum found that leveraging this vast amount of data will be critical to developing a deep understanding of the learning pathways students follow to develop performance and foundational life skills. This will enable practitioners to further develop the effectiveness of digital learning for these skill types (Luo, Li, Subotić, Woodward; 2015).

Case Study

Knowledge Factor has developed a unique adaptive learning solution called Amplifire based on a proprietary “accelerated memory protocol” – a series of neuroscience-based learning techniques that are proven to systematically trigger engagement, learning and long-term knowledge retention through the creation of a new memory. Some of the key triggers at the core of Amplifire include:

- Priming: All of the content is delivered through a question and answer format that creates a mental framework for the content to be learned.
- Confidence and emotion: When giving an answer, learners are asked to provide a self-assessment of their level of confidence in their answer choice. This has been proven to activate areas of the brain responsible for memory formation, which helps in content retention.
- Feedback and spacing: The tool provides high-level feedback on the learner’s answer choices right away, but does not give a full explanation and/or additional context until some time has passed. This serves to heighten curiosity and promotes long-term retention.
- Dopamine: The software is based on the concept of desirable difficulty – repetitive patterns of struggle and success that optimize learner dopamine levels and engagement.
- Visual cues: While cues are helpful in learning, they can hinder long-term recall when the cue is no longer there. The Amplifire software removes the visual cue once a question is answered correctly and dynamically retests the learner’s understanding.
- Working memory: The software assesses each learner’s working memory capacity (how much new material a learner can store in short-term memory) and adjusts the amount of material he/she interacts with in each learning module accordingly to maintain a balance of challenge and progress.

Amplifire has been shown to deliver strong results relative to traditional classroom learning, with learners reportedly achieving over 95% mastery levels of content and 80% retention levels in 50-75% less time.

Source: [http://www.knowledgefactor.com](http://www.knowledgefactor.com)

Accenture has partnered with Knowledge Factor to develop several financial literacy courses for its Skills to Succeed Learning Exchange through Amplifire.
Steps to Achieve

Align the organization around the need for adaptive learning

As with any key structural element of a program, it is important that stakeholders share the same understanding of what adaptive learning is going to accomplish for the organization and are bought in. It is especially important to get buy-in from the instructors since they will be directly impacted by the decision to adopt the technology (Eduventures, Inc., 2014).

Define the program areas where adaptive learning will be most beneficial

It is recommended that adaptive learning be first introduced in content areas where the organization faces the greatest pain points in terms of delivering customization at scale. Doing so will help address burning issues while establishing a framework for efficient implementation that can then be leveraged across the rest of the digital learning program (Eduventures, Inc., 2014).

Choose the technology solution best suited to the program goals

A wide variety of technologies can be leveraged for adaptive learning, varying in frequency of assessment and customization, cost, data security, etc. Selecting the tool that best suits the organization’s needs is important to ensure a successful outcome (Eduventures, Inc., 2014).

Content Delivery Through Games and Scenarios in Digital Learning

“Gamification” refers to turning the learning process itself into a game. The core of the program content delivery does not change, but elements like achievement badges, points, leader boards, progress bars and levels/quests are introduced to provide an incentive for learners to progress through the program. For programs looking to integrate game-related elements into existing digital learning content, gamification is often an effective approach to do so without changing the content itself.

“Game-based learning” (GBL), on the other hand, refers to learners playing actual games as part of the learning process. The games aim to teach specific skills or program elements relevant to the course content. For programs looking to integrate game-based learning into existing digital learning content, adding “spot” gaming activities in between and/or at the end of existing modules is often an effective approach.

Ultimately, both approaches aim to motivate learner participation and improve learning outcomes (Medved, 2014).

The ability for learners to practice the content learned is a key factor in digital learning program success, and both games and scenarios provide an effective way to do so (Allen, Dirksen, Quinn, Thalheimer, 2014). 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 traditional classroom learning (Sitzmann, 2011).

Scenarios and games have been particularly effective in producing lasting learning outcomes when teaching employability skills, a domain where practice and extensive feedback are key to learner success (Olsen, 2013). Accenture’s Skills to Succeed Academy uses simulations as part of the learner’s journey alongside character-based eLearning modules. The simulations allow learners to practice their skills in a safe environment, enabling them to experience the consequences of the decisions that they have made on the behalf of the characters. Entrepreneurship skills also appear very well-suited to the scenario and games-based content, based on HP LIFE’s observations.

Gamified or game-based learning need not be adopted by the entire program, but can be used selectively in portions of the program that are best suited or provide the best return on investment.

On top of providing relevant practice opportunities, scenarios and games can be leveraged to perform skills assessments for digital learners in order to understand their competency level and learning needs. This can then help define the customized learner path through the curriculum.
Design the scenario- and game-based learning elements to maximize effectiveness

Experience has shown that seeing immediate, salient consequences to the decisions made in scenario and game-based learning is key to the learning process by allowing learners to adapt quickly to lessons learned and put them immediately into practice. Three additional design elements have shown to produce effective scenario- and game-based learning (Balance, 2013):

- Narrative: Provide an emotional response to the game that helps learners retain information.
- Challenge: Humans are, by nature, are motivated to win.
- Replayability: To really remember something, we need to repeat it (or replay the game) a minimum of three times.

Social Learning

Social learning integrates an element of social 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). The primary goal of social learning is to increase learner engagement.

Case Study

"VIA recently worked with HP to create inexpensive and effective game-based learning tools that are scalable and reusable to be repurposed by multiple departments and rolled out globally. Because of the low cost of the revisions, game development is now an option available to all learning program managers within HP. They quickly can add one or two games to augment their individual learning programs with a cost below 20% of developing the game from scratch" (Ballance, 2013).

Steps to Achieve

Determine importance of a social learning platform based on the beneficiaries’ profile

A high level of dialogue is required for some beneficiaries to feel an increased sense of community, become engaged and learn effectively. However, a low level of dialogue might be able to accomplish that same feeling among highly autonomous learners, making a social platform less crucial to the success of the digital learning program (Andres, Joo, Shearer; 2014). The same logic applies to older learners and learners with higher motivation (Harrison, West; 2014). These conclusions are based on The Theory of Transactional Distance (Andres, Joo, Shearer; 2014). The following were the top reported challenges to maximizing engagement in digital learning based on several research studies (Muuro, 2014) and (Allan, Lewis; 2006):

- Lack of participation by peers (likely due to varying levels of motivation)
- Lack of timely feedback from instructors
Lack of perceived importance of social platform within the program (lack of clear expectations around extent of participation required and time commitment needed).

Thus, in order for the social platform to be beneficial, it needs to be perceived as a key part of the program by learners; participation must be seen as an integral part of the learning process.

Instructors need to create not only opportunities for learners to interact with one another but the requirement that they do so (Dixson, 2010).

Furthermore, it is also critical that the social platform be monitored or moderated by the organization to ensure it is being used for the intended purpose and to ensure that content questions are being answered in a timely and accurate fashion.

Social platforms can take a variety of forms. While they are generally text-based, Quest Alliance has introduced an interactive voice response platform which allows students to ask questions and interact with one another and the instructor. The addition of the voice element is another way to enhance the experience and build a sense of community.

The platform can be restricted to learners and instructors, but it can also be opened up to the broader organizational community to give learners exposure to more stakeholders with diverse experiences, points of view and tips to share in order to enrich the learning experience. While not yet often leveraged by digital learning programs, there could also be the opportunity to invite employers to join the conversation, which would open the door for connections that can potentially be leveraged during the job-search upon completion of the training.

Examine how to leverage the platform to facilitate collaboration among instructors

Social platforms also greatly facilitate the teaching process by allowing instructors to share digital learning content among each other (curriculum guides, teaching resources, research and policy papers, as well as many others).

Case Study

Countries around the world have embraced national school networks to facilitate knowledge sharing among digital learning program instructors. They are now starting to take this to the next level by connecting the individual national networks, to allow for international collaboration. The Enlaces program in Latin America has linked schools from Spanish-speaking countries like Chile, Paraguay, Costa Rica, Colombia and Peru to create regional collaboration, and there is an initiative underway to create a region-wide ASEAN school network (Tinio, 2013).

The development of this social collaboration infrastructure for instructors has meant that it has become increasingly easy to get the necessary content and support to teach digital learning programs. Integrating a social platform element into digital learning programs is essential to allow instructors to tap into this collective knowledge pool and participate in the global digital learning conversation.
Overcome Barriers to Accessibility

Steps to Achieve

Ensure that learners can connect to participate in the program

Lack of access to the ICT needed for digital learning can be due to a particular beneficiary’s lack of access, or to the general infrastructure situation in a given locality. It is important for the organization to cater to the ICT environment in advance of program launch by looking at a wide variety of factors, including access to reliable electricity, bandwidth, firewall management, network management systems, and more.

Connectivity for the learner is a cornerstone of successful participation in a digital learning program. In areas where connectivity is sparse, establishing community centers with shared access has been a successful strategy around the world for digital learning programs. A couple of examples are:

- CE3, a collaboration between Accenture and University of Notre Dame, bringing solar energy, ICT labs and entrepreneurship training to youth in Uganda
- Madagascar’s “ICT villages” with computer labs and community Internet access that residents can use when needed
- Mauritius’ fleet of “cyber caravans” that circulate between communities to bring computers and Internet to residents in remote areas.

In these limited connectivity contexts, a best practice is making digital content available offline and syncing the device when it comes back online. This allows learners to consume content at their own pace wherever is most convenient for them and benefit from the Internet-dependent program components (e.g. social platform and learning games) when they are able to re-connect. Quest Alliance is one of many organizations that have leveraged this program model successfully.

Though ICT barriers can present some of the most significant hurdles to setting up a digital learning program, it has been proven possible to overcome and work around them in nearly every environment.

Determine which device types are best suited to the program

According to Michael Trucano, the World Bank’s senior specialist in ICT and education policy specialist, “the best technology is the one you already have, know how to use and can afford”. Instead of focusing on introducing increasingly superior new technologies, which bring new implementation challenges, the focus should be on using what is already in place. In the context of digital learning in underprivileged communities, this is most often a mobile feature phone (Trucano, 2013). While mobile adoption is high in developing countries, smart phones allowing easy Internet access remain rare. Only 31% of the population in developing countries is “online”, with that figure dropping to under 10% in the world’s 49 least developed countries (Watson, 2015). The main hurdle remains prohibitive high-speed broadband costs due to poor network coverage, the lack of affordable devices, relatively expensive service costs (Africans spend about 17% of their monthly income on mobile subscriptions versus 2% in OECD member countries).

In these regions, mLearning (via mobile feature phones) allows organizations to deliver content, offer learning support and communicate with students. Despite the limited functionality of these devices, there is an increasing number of successful digital learning programs that are overcoming these challenges and delivering impressive results by leveraging devices that learners already own and use on a daily basis.

Digital learning programs require support to help trainers learn to use new digital tools and understand how to shift their role from the ‘sage on the stage to the guide on the side’.

Case Study

Africa has seen wide-spread usage of mobile phones, with penetration of 97% amongst the community health volunteer (CHV) population. However, almost 70% of them still use basic feature phones, with smart phones being a very small minority. Based on this, Accenture and Amref Health Africa developed a strategy for creating an innovative mobile learning solution, the Health Enablement and Learning Platform (HELP), that could deliver training to CHVs using their basic phones. The initial phase was a 12 month pilot across three sites (rural, nomadic and urban) to train 318 CHVs.

Overview of HELP program features:

- Built for basic phones, but implements advanced features
- Almost any CHV can access the system after only one and a half days of instruction, making the solution scalable and sustainable
- SMS and audio content delivery is intelligently controlled with an advanced Scheduling system
- A tailored mLearning pedagogy defines multiple interaction and learning approaches
- Group chat allows collaboration within community units
- Automated reports keep CHVs and supervisors informed and on-track

The program has generated very positive feedback from CHVs and high adoption of solution. Average successful pass rate of 86% across topics.
Enable Trainers

Steps to Achieve

Determine pedagogical approach trainer will need to adopt, based on the beneficiaries

To maximize the value of face-to-face time, digital learning generally involves a paradigm shift of the role the trainer in the learning process: a shift from instructor to facilitator, which is often called a shift from the ‘sage on the stage to the guide on the side’ (Friedrich, 2010). However, the pedagogy most suited to a given digital learning program is largely determined by the learner characteristics.

- For learners who are less independent and have minimal digital literacy: The trainer plays a more active role in directing the learning, relying heavily on instruction. He/she largely teaches in a linear pattern of teaching content, followed by assessing learning. This is aimed at evaluating and benchmarking student learning at the end of an instructional unit.

- For learners who are more independent and digitally literate: The trainer plays a less active role in directing the learning, focusing more on mediating the learners as they navigate the curriculum autonomously. Formative assessments are used to verify learning, aiming to monitor learning on an ongoing basis and address issues immediately. (Mentis, 2008).

Prepare trainers for their new role

Transitioning to a new pedagogy as well as learning to leverage the digital medium 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. This can be an especially lengthy process if the trainers themselves are not digitally literate. 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 can be acknowledged, encouraged and rewarded through accomplishment certificates (Friedrich, 2010).

Digital “train the trainer” programs have generally proven to be equally successful as non-digitally delivered equivalents. Delivering the training online builds instructors’ understanding of the concepts and tools of eLearning, increasing their level of comfort in the subsequent delivery of e-learning to students (UNESCO, 2004). A train the trainer program in the Philippines by FIT-ED, Inc. and Coca-Cola® Educational Ventures has found that these training models need to be able to accommodate instructors at various experience levels and digital instruction proficiency stages to be relevant as the level of instructor competency grows (UNESCO, 2004).

The goal, according to InfoDev, should be to achieve the following teacher training standards for digital education (Wagner, Day, James, Kozma, Miller, Unwin; 2005):

- Teachers understand technology operations and concepts
- Teachers plan and design effective learning environments supported by technology
- Teachers can implement plans that include methods for applying technology to maximize student learning
- Teachers can apply technology to facilitate assessment
- Teachers can use technology to enhance their own productivity
- Teachers understand the social, ethical, legal and human issues related to the use of technology.

Case Study

In Nigeria, UNESCO is piloting an instructor training program with English teachers. Program leaders send text messages to teachers daily with best practice examples and modular lesson samples of how to teach digitally. The messages are designed for viewing on feature phones, which are most common in Nigeria. UNESCO has received feedback from participating teachers, stating that the training is instrumental in updating their teaching style to improve their programs. It is also allowing teachers to share their learning with one another, which was previously next to impossible due to geographical separation. Participation is encouraged through an agreement with the local mobile provider to keep costs for users low (Briggs, 2014).

Support trainers and create buy-in for digital learning

Moving to digital learning represents a large pedagogical change for trainers, and this change needs to be comprehensively managed to make sure trainers are not only capable of being effective digital learning instructors, but that they are also willing to be. Trainer support is critical in ensuring success of digital learning programs. Research findings show that trainer coaching in the domains of course development (86%), technical help (86%) and instructional design (82%) are key factors in the success of digital learning programs (Abel, 2005). Needs–based just-in-time peer coaching was shown to greatly improve development of teachers’ ICT and pedagogical skills for effective e-learning delivery. A particularly effective strategy was assigning novice instructors a more experienced “buddy”/coach to guide them (UNESCO, 2004).

Creating a support community where trainers can help one another has been an important factor in successful digital learning programs. It has allowed instructors to share relevant reports, articles, training and resources, as well as accessing advice from faculty who have taught web-based courses in the past. It must be noted that these online support communities do not need to be restricted to a single digital learning operator.
Accenture’s Skills to Succeed Academy program is deployed through multiple delivery partners from across the welfare to work sector. Establishing networks of champions across those partner organizations has enabled advisers and facilitators to collaborate and share their diverse experience of delivering the program, allowing best practices and learnings to be communicated across the partner network.

Validate Learning in Digital Learning

Steps to Achieve

Once learners begin the program, it is important to track their progress and outcomes at every step to understand performance and be able to meet their needs as best as possible. Some organizations validate learning for the digital portion of the program alone, while others validate for the program in its entirety.

Measure course completion

Course completion is the most basic metric to monitor. While it by no means guarantees that the content was absorbed, it shows that it was consumed. Various tools exist to monitor course completion in the digital context, ranging from Learning Management Systems (LMS) which track this at the course level to Learner Interaction Monitoring Systems (LIMS) which track it at the learning object level. LIMS provide a better understanding of online learner engagement with the content by measuring metrics like duration of time spent on each element and response latency on assessment activities. The data collected offers valuable inputs into future course modifications and gives additional data on which to then base the program ROI measurements (Macfadyen, Sorenson; 2010). This granular information allows insight into where to focus directed improvements that would not possible when validating learning at the program level.

However, while course completion should be part of the learning validation process, it is seldom effective in isolation and can be a misleading measure of learning outcomes. The Prep@Net digital learning program in Mexico is one example. The program’s percentage who graduate is in line with the national Mexican average (of students across all medium types), but its learner performance is far below the national mean (Islas, 2013).

Digital learning tools that track learner performance at a greater degree of granularity make it easier to validate learning further along the Kirkpatrick spectrum and target program improvements more effectively.

Verify acquisition of skills post-training

The LMS capabilities that help track course completion can also 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.

Much like in traditional classroom learner assessments, digital learner assessments serve to evaluate competence level. While traditional quiz-type assessments can be leveraged for this purpose, adaptive programming, games and other digital technologies provide new digital means of assessing learner skill level in a way that is integrated with the learning process. Research has shown that the most effective way to gauge learner competency level is by measuring not only comprehension of the material but also decision-making ability with the content – something that is easier to accomplish with these digital methods than with a quiz-type assessment (Allen, Dirksen, Quinn, Thalheimer; 2014).

Whatever the form, these evaluations should ideally be done not only immediately after the training but again at least a week post-training to ensure content retention (Allen, Dirksen, Quinn, Thalheimer; 2014). Studies have shown that digital learning can lead to 25%-60% improved content retention relative to traditional classroom learning (which has an average content retention rate of ~60% on average). As an example, IBM® reported learners in a recently rolled-out eLearning program for managers absorbed nearly five times more in the same amount of training time (Evans, 2013).

Case Study

In India, the organization Quest Alliance engages trainers at different points in their digital learning journeys to become blended learning facilitators. It begins by conducting a four-day training to introduce the trainers to blended learning tools, with follow-up subject-specific online tutorials used to bridge the more concrete knowledge and skills gaps. During their first year, all trainers are also supported via in-person visits from Quest Alliance staff members to provide in-class mentoring and support. Furthermore, the trainer portal provides learning resources and a platform for peer-to-peer exchange that enables them to connect and share knowledge. Finally, an online “MasterCoach” certification is provided for high performing trainers to get a professional edge and become role models for others.
Measure relative improvement in skills

In order to be able to measure incremental improvement in learner skill level, programs must evaluate the baseline learner competencies at the outset of the program. In order to quantify the relative improvement, evaluation metrics of this initial evaluation should match up with those used to measure learning at the completion of the program. Some organizations like the Spanish Red Cross have developed internal diagnostic tests/simulations to do this baseline beneficiary competency assessment. However, there is a wide range of resources openly available that can be leveraged for this.

Case Study

The World Bank's STEP Skills Measurement Program aims to establish a standard in measuring beneficiary skill levels, especially in low- and middle-income countries. It has developed detailed tools and methodologies to collect skill-related data, which can be leveraged by organizations looking to get this type of information on their program’s beneficiaries. Furthermore, the data collected by the STEP program is publicly available through the World Bank’s Microdata Catalog, allowing organizations to benchmark their participant skill-level information collected relative to the national data along the same dimensions (The World Bank, 2015).

NOTE: The STEP program goes a step further to look at the link between skill level and employability, which can also be helpful to learning programs as they develop their program. A study found that 67% of digital training program directors interviewed do not measure the effectiveness of their net-based programs at all. While 95% of surveyed organizations gauged learners’ reactions to courses, only three percent made a real effort to measure the business results of training programs (Strother, 2002).

The Kirkpatrick® training evaluation model is one common approach to learner improvement measurement. However, a learning evaluation methodology by Jack Phillips builds on this model to make it more actionable and overlay an ROI component. As a result, many organizations have migrated to it as their main structure for learning evaluation. While learner improvement is a key performance metric for learning programs, research has found that it is still a big missing piece for most digital learning programs. One

Case Study

One popular option for creating course completion certifications is Mozilla® badges. Its free software allows any organization to create and issue digital badges for completion of its trainings. Learners can collect badges from multiple sources (online and offline), weaving them into a cohesive story of their skills and interests. These can then be displayed on social networking and job search sites.

Another option growing in popularity is LinkedIn®’s “direct to profile” badges. It allows organizations to create certifications that are displayed on profiles of those who complete them (allegedly "badged" LinkedIn profiles get 6X more views).
Motivate Learners

The digital medium often facilitates longer-term engagement by making it easier for alumni to connect and allowing them to continue to participate in ongoing learning and mentorship activities at minimal cost.

Steps to Achieve

Set advance expectations for what learners will get out of the program

Setting accurate learner expectations before they start the program is critical for them to understand the journey they are embarking on and the outcomes they can expect at the end; this transparency is an important contributor to learner engagement, helping reduce program drop-out rates.

Keep learners engaged in the content

Engaging learners in the content itself can also be a powerful motivator. Research has also shown that in order to build learner engagement, it is important to engage them not only with the content but more importantly with each other and with their instructors, perhaps through social digital learning platforms. Both gamified and game-based learning aim to motivate learner participation and improve learning outcomes and can be used as an effective tool for improving learner engagement (Bayerlein, McGrath; 2013, Medved, 2014).

Provide recognition and rewards

Providing recognition and/or rewards for learners when they reach important training milestones has also proven to be a successful strategy when structuring self-paced programs. Additionally, providing certification for digital learning program completion is an important best-practice. Accenture’s Open Education has found it to be a critical motivational “gateway” to boost both learner motivation and course completion rates.

Access to career services, especially opportunities to interview for an internship or job, can be a powerful reward. For example, ELBA has found their drop-out rates have decreased from 25% to under 5% by offering career services only to those who have demonstrated commitment and understanding by successfully completing their learning program.

Inspiring learners to be motivated to complete digital learning programs successfully can be encouraged by setting accurate expectations of the program in advance, keeping learners engaged throughout the program and providing recognition and rewards to program completers.
Develop Supportive Alumni

Steps to Achieve

Keep track of alumni

In order for programs to analyze their long-term learner impact, programs should track the location and employment status of their alumni at regular intervals. As Fundación Entreculturas has found, this is made easier through digital learning. Digital means are often the easiest, fastest, lowest-effort way to communicate. Since digital learners become used to digital interactions with the organization, they are more willing to respond to online questionnaires regarding their post-training activities. Learners with a deeper relationship with program are especially willing to provide these updates. IVFM has found that their strongest response rates have been for learners who completed the higher-touch online programs rather than more arms-length online models.

Information collection on alumni status can be carried out at various intervals – the goal is to minimize the burden on alumni from a response frequency perspective while ensuring that the program has the necessary information to optimize its offering. Three- and six-month intervals are a common cadence used by organizations such as Upwardly Global, Net Hope and HP LIFE.

Despite these various strategies, alumni tracking remains a challenge to most organizations, even elite universities. It is something that must be maximized as much as possible, but a very high response rate is an unrealistic goal.

Provide ongoing alumni support

Many organizations (such as Quest Alliance) are finding that engaging alumni through offering continued services post-graduation provides an incentive for them to remain in contact with the organization. This greatly facilitates the collection of information on their post-graduation activity and performance.

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 at minimal cost to the organization (Carrington Crisp, 2014). This follow-up training access for alumni is a best practice cited in the E-Learning Manifesto (Allen, Dirksen, Quinn, Thalheimer; 2014).

Continued career service support for alumni is another important in-demand offering that can be delivered digitally at minimal added cost, helping ensure that alumni continue to be employed in jobs that align with their goals. Continued mentorship for alumni is also a strategy that has proven effective for some organizations to encourage ongoing engagement after program completion.

An example of the last point is the KIPP Through College program that matches KIPP high school program graduates with mentors. These mentors support the alumni as they navigate through college – they suggest activities to enhance the college experience, provide academic and career-related guidance, help arrange for college financing and serve as an overall support for the students to help ensure their success in college.

Turn alumni into program advocates

Providing alumni with these types of services has been shown to increase the perceived value that alumni have of the learning program. Given that perceived program value is a key predictor of alumni giving (with 40% of college alumni giving to their educational institution when perceived value exceeded program cost vs. 15% when it did not), it is critical for programs to enhance it through continued alumni development opportunities to maximize the alumni funding received (Yai, 2015).

Maintaining alumni engagement can also often provide tangible benefits for current program participants. Organizations such as Quest Alliance are finding that alumni who find employment post-training and come back to share stories can provide compelling glimpses into the opportunities that exist post-training and thus motivate learners to complete the program.

The alumni can also serve as useful connections to employers. This can help the learning organization secure their employers’ participation in digital learning content creation as well as have visibility of internship or employment opportunities that open up. These alumni can then serve as mentors or coaches for current learners as they apply for these positions. Organizations like EFE are actively working to establish this type of collaboration with their alumni base.
SECTION 3
Build a Scalable Operation
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.

Steps to Achieve

Establish a collaboration with the private sector

The number of bilateral partnerships between private-sector organizations (mostly in the ICT field, such as Microsoft®, Cisco®, Intel® and Hewlett Packard®) and educational organizations has increased dramatically in recent years, serving as tremendous assets in the development of successful digital learning programs (Farrell, Isaacs; 2007). Several of the most common ways the private sector gets involved in digital learning programs are (Center for Education Innovations, 2014):

• Providing instructor and program administrator training/development: Often focused around ICT skills and capitalizing on skills of the corporation.
• Enabling access to ICT infrastructure: For example, local telephone companies and ICT industries can provide connectivity through hardware devices, community centers with internet access, or offering affordable mobile carrier rates for learners to engage in digital learning (UNESCO, 2004).

• Providing funding/sponsorship for internship and apprenticeship programs.

• Improve credibility of certification.

• Participating in program management committee: Leveraging expertise in program management development, execution and management.

Case Study
Cisco is a key private-sector partner in Louisiana and Mississippi’s “21st Century Initiative” educational reform, contributing $40 million in technology programs support. The funding is being used to:

- Build connected schools: extensive network, data center and physical plant upgrades
- Establish connected learning: teaching instructors and administrators how to integrate new technologies and e-learning into their lessons
- Create connected communities: enabling broadband access and offering support to parents and teachers

Furthermore, 18 Cisco leaders temporarily relocated to the various program locations to provide consulting services in educational governance, teacher training and the integration of e-learning into high school curricula.

The collaboration resulted in a very successful program across 37 communities to-date, with:

- Over 30,000 students directly benefiting from the 21S program
- More than 3,000 teachers trained in new technologies and innovative e-learning methods
- The deployment of a fully converged voice, video and data technology infrastructure in all participating Mississippi schools


Consider partnering with established educational institutions
Partnering with well-established, reputable higher education providers has shown great promise in the digital learning space. It provides programs with access to a wide range of resources at the disposal of the university, eliminating the need to build them from scratch. This provides the opportunity to ensure program quality while minimizing costs. Key advantages of this type of collaboration include access to:

- High-caliber learning content
- Physical facilities
- IT resources and infrastructure
- Knowledge capital around leading best practices, research and subject-matter experts
- Technical support
- Teacher support (pedagogy and teaching)
- Affiliation with known brand name when seeking funding and/or partners
- Ability to provide learners with recognized accreditation for program completion (the same can be said for trainers who complete digital professional development programs).
Case Study

The Institute for Veterans and Military Families (IVMF) is an example of a digital learning initiative that has university collaboration at its core, established by Syracuse University to address education and employment challenges of US veterans and their families.

Through the numerous programs that IVMF offers, learners have access to many of the same resources as the other students of the university. They have many of the same learning resources, technology and equipment, mentorship (through private sector supporters, including JPMorgan Chase & Co. who is the institute’s founding partner) and extensive career support services at their fingertips to help them through their learning journey.

Upon completion of the IVMF’s Veterans Career Transition Program, distance learners can achieve industry certifications in over 30 fields (such as Project Management, Human Resources, Six Sigma and myriad Information Technology domains) as well as receive a certificate issued by the university – a credential recognized in the marketplace as an indicator of skill level and work readiness. With lack of certification consistently cited as a major hurdle for digital learning programs as well as an oversupply of certifications that are not truly recognized in the market, this university “stamp of approval” is a key advantage of the program for IVMF participants.

As a result of the success that IVMF’s Entrepreneurship Bootcamp for Veterans with Disabilities (EBV) has had at Syracuse University, the program has expanded to a number of other universities across the country including Texas A&M, Purdue University, UCLA, the University of Connecticut, Louisiana State University, The Florida State University and Cornell University. This program delivers experiential training in entrepreneurship using a blended model of instruction engaging learners first through distance and then residency components.

The Boots to Business program, a cooperative agreement between the U.S. Department of Defense, Small Business Administration and IVMF has reached over 24,000 service members since its inception in 2013. Through this program, U.S. service members transitioning out of the military can engage in entrepreneurship training via a two-day workshop at their military installation followed by an eight-week online program facilitated in conjunction with Syracuse University’s Whitman School of Management.

Organizations with digital learning programs are also partnering with established educational institutions to jointly develop and deliver digital instructor training courses. A lack of professional development for instructors is a key challenge to effective teaching, and these collaborations allow teachers to learn from leading scholars and get the support they need through a flexible digital learning model.

- One such program that has recently been launched in 2014 is the teacher professional development program jointly launched by Coursera and Vanderbilt University. With just one course launched so far, the program plans to add to the offering throughout the year and bring on additional university partners to help in the content development and delivery (Vanderbilt University, 2015).

- Microsoft and Lamar University have also partnered to provide a technology literacy program for educators. Upon completion of the program, instructors will receive a Microsoft Certified Educator certificate. If they can then demonstrate the effective use of these technology skills in a classroom setting, they will also receive a Certified Digital Educator certificate diploma from Lamar University (Sattler, 2015).

An optimum operating model for a digital learning program requires specific changes to multiple core components of the operating model, including organizational structure, localization, people, processes, tools and governance.

Engage the public sector to help the program

Government support can facilitate digital program implementation in several ways (Waema, 2002):

- Provide funding: Due to longer funding cycles in government, digital learning programs funded with public funds often have to re-apply for funding less frequently which diminishes the financing risk that they expose themselves to.
• Encourage involvement from the private sector through mechanisms such as tax holidays.

• Align public policy with digital learning: a key factor in ensuring program scalability and systemic change.

• Provide a delivery channel for the hardest-to-reach beneficiary groups: Working with government departments to deliver digital learning may enable you to reach hard-to-reach beneficiary groups at scale, without compromising the quality of the support offered to beneficiaries. Not only does it provide an effective way to reach these populations but it does so in a way that minimizes the number of delivery partners and channels that need to be managed simultaneously. This has been the experience of Accenture’s Skills to Succeed Academy in the UK.

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In order for this to public sector collaboration to occur, organizations with digital learning programs must actively engage with the government to ensure that it understands the advantages of digital learning and is up-to-date on the programs that are being launched along with the benefits generated.

**Identify a network of delivery partner organizations**

Delivery organizations looking to take their program digital find it equally critical to select a program content provider that matches their needs and will enable them to smoothly transition their program to the digital sphere. Likewise, organizations who do not deliver their digital learning programs themselves find it critical to select delivery partners who are bought into the program and able to deliver it effectively and efficiently.

These partners become an essential source of local knowledge and help drive the scaling of the digital learning program. The goal is to make these partnerships long-term, so finding the right partners is essential. It entails a detailed evaluation of strategic alignment, operational fit, current capabilities and implementation risk. A detailed scorecard that can be used to leverage this evaluation framework for rating the fit of potential delivery partners can be found in the toolkit.
Design the Detailed Digital Learning Operating Model

Steps to Achieve

The operating model is the platform that the organization’s offerings are built upon and delivered through – it must be carefully designed to ensure that the strategy is efficiently and effectively executed, taking into consideration the structural and execution elements below (Accenture, 2014). Introducing digital learning has a domino effect across most elements of the operating model, from program design to delivery and support.

Structural

Organization Structure: Adjust to accommodate digital learning

The organizational structure becomes more agile for digital learning programs. Instead of having a small permanent instructor base teaching a broad range of topics in a single location, organizations often have a larger, more diverse and distributed instructor base with niche roles supporting the program on a more flexible basis. The benefit of this is access to relevant, timely expertise, but it also brings the challenge of creating a cohesive culture and loyalty among the instructor base. Proper background and organization-specific training must be provided to drive success.

The digital organizational structure does not end at the organizational walls – stakeholders involved in developing and delivering the learning program can often be “external” to the organization, with cross-sector partners and learners themselves having the ability to contribute to the program. As a result, the operating model transitions from being the structure that the company builds its offering upon to a structure that the outside world can collaborate on to help build the offering together (Dignan, 2013).

Localization: Shift focus away from physical location

While the element of geographical location retains some importance for digital learning programs (especially for blended models), its importance is diminished relative to traditional classroom programs. The focus is instead shifted to supporting learners as they navigate the digital program, with the quality and timeliness of the support trumping the geographical location that it comes from (while, of course, keeping in mind language and cultural considerations).

Time localization is also much less rigid for digital learning programs. Rather than having set program start dates throughout the academic year and pre-specified program lengths, digital programs generally have rolling start dates and flexible durations depending on learner skill level and performance. This means that the program is often supporting multiple learners at a time that are doing a wider range of programs and are each at varying points of the programs at a given time.

Execution

People: Enable skill sharing among stakeholders

Digital learning facilitates the sharing of skills across the organization. People with specific expertise in one location can be easily leveraged virtually to help develop a piece of content or deliver a program element in their domain of expertise, throughout the organization. This results in fewer experts needed for the organization as a whole in any given domain, while optimizing the use of everyone's expertise.
Processes and Tools: Enable sharing among stakeholders

Digital learning platforms come with more standardized tools and processes, resulting in more consistent program delivery across locations. It provides greater consistency in program tracking (gathering and monitoring uniform metrics across all of its operations). This facilitates comparison of program components and sites relative to one another, helping to identify both issues and best practices. It provides a more accurate global view of the organization's performance relative to its strategy and objectives. Given the dispersion of stakeholders in terms of both time and place in digital learning programs, however, it is important to document and communicate these organizational processes clearly to ensure their understanding and adoption.

Organization Design: Design and governance for a digital learning program

Many organizations, such as Starbucks™ and AB Volvo, have created new Chief Digital Officer positions in recent years to oversee set the direction for the digital part of the business and Digital Liaison positions at the local level to implement that digital agenda at the affiliate level. While new roles do not necessarily need to be created, it is important to identify a champion in the existing organizational structure who will “rally the troops” around digital learning and give him/her ambassadors at the local level to provide support (Tannou, Westerman; 2012).

Digital learning programs should have a steering committee appointed at the organizational level (as opposed to the local level) to make investment decisions related to digital learning, examine issues that are escalated and ratify policies. (Tannou, Westerman; 2012).

Select Supporting Technology

Steps to Achieve

Develop Learning Management System (LMS) requirements and evaluate current technologies in use

When determining requirements and selecting a technology, it is important to consider the technology ecosystem of the organization, not only the technology being selected. In a recent survey by Accenture of its Skills to Succeed practitioner network partners, organizations were often found to be using one technology per capability area (e.g., performance management, marketing, training delivery), with little to no integration between tools. Understanding requirements for integration between tools is an important factor to consider in the selection process.

Generally speaking, defining and prioritizing requirements for the LMS can be determined hand-in-hand with designing the program and the learning content. If digital learning technologies are already in use, a good first step is to understand if and to what extent they could be leveraged and what gaps might exist. The least costly approach is generally to use existing licenses or technology. In the event that gaps are too wide or no LMS is currently in use, the organization has three choices:

- Build a proprietary technology solution in-house
- Borrow a solution from a program partner through a sharing agreement, or borrow from a free open-source solution, such as Moodle
- Buy a technology solution.

Evaluate technology options in light of requirements

The key elements to consider when performing this evaluation include (Accenture, 2014):

- Functionality, including features, complexity, integration potential with existing technologies at the organization and/or program partners and scalability (amount of content / courses / beneficiaries it can support. In addition, localization / translation support offered by different technology platforms is an important element to consider for programs planning to operate across multiple geographies.)
- Cost (development cost, maintenance cost, operating cost per user).

These elements can be integrated holistically into the overall program business case.

Integrate the selection into the digital learning program implementation roll-out plan

It is important not to omit any training that will be necessary for program stakeholders to be able to use this solution effectively.

Make a selection and socialize it to get buy-in across the organization

Video Transcript: Funding for Digital Learning Cross-sector Collaborations, Luis Arancibia

[Click here for more information]
SECTION 4
Execute the Program
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.

It is critical for organizations to understand that a pilot is not the same as a small-scale program – a mistake made by many organizations. A pilot must be seen as the first phase of a large scale deployment – its core purpose is to test for the feasibility of the full-scale implementation. As such, while the funding and implementation of the full roll-out must be contingent on pilot success, they must be planned for from the very start of the pilot to ensure that the ultimate objective (the full deployment) is never lost from sight.

Benefits of running a pilot program include (Bassi, 2010):

- Securing funding more easily: For the initial, less costly pilot as well as gathering evidence to secure funding for the full program
- Testing assumptions and catching/correcting operational errors
- Assessing the impact that the program has on stakeholders and communities involved
- Giving project team members experience with a digital learning program before engaging in a more complex, larger-scale program
- Comparing two or more similar solutions.

Steps to Achieve

Establish a clear set of objectives for the pilot

The following questions must be answered and aligned on across the organization before launching any pilot initiative (Bailey, Ellis, Schneider, Vander Ark; 2013): Why are you running the pilot? What do you hope to learn? How will you know whether you have learned it? What will you do once the pilot is complete?

Depending on how impact is defined, it can sometimes take several years to realize the full impact of a digital learning pilot. Therefore, it is important to set the success/failure threshold level for the pilot ahead of time that will be sufficiently indicative of whether moving onto the full-scale program is in everyone’s best interest.

Design the pilot program

In a recent survey conducted by Accenture of its Skills to Succeed partner organizations, two thirds of respondents ran a pilot project before rolling out a full digital learning platform. In 70% of cases, the pilot cost under USD $70K. On average, they consisted of five courses and ran for a period of six months (with each participant taking between two and three courses during that period). (Accenture, 2014).
Key design considerations include duration, geography, size (# of students/teachers/organizations), budget, technology readiness and content providers (Blois, 2013).

- It is important to match the pilot setting as closely as possible to the environment(s) that the organization plans to roll the full program out in. What works in some environments does now work in others, which has been a key reason that pilot findings have in some cases not corresponded to ensuing full-program results when the environments of the two varied greatly (Trucano, 2013).
- The sample should be large enough to provide statistically significant information while being small enough to be easy to manage.
- One to three content providers seems to be the recommended "sweet spot" by organizations who have done pilot roll-outs previously (Blois, 2013).

Set measurable metrics for the pilot that gauge progress and success

Generally the business case needed to get approval/funding for a digital learning pilot initiative does not vary greatly from that needed to get approval/funding for the full-scale equivalent. Therefore, the metrics used to measure pilot progress/success do not generally vary either. (Click here for more information.)

Ensure the staff administering the pilot program receives the professional development needed

This professional development generally centers on pedagogy differences inherent to digital learning as well as the technology associated with it. The need for training and development to execute a pilot does not vary greatly from that needed to execute a full-scale program successfully. (Click here for more information.)

Roll Out the Full-Scale Program

Full-scale program roll-out follows the same principles in digital learning as it would in a traditional learning program.

If the digital learning pilot proves successful, the full-scale program roll-out can take place immediately as planned. Otherwise, the reasons for pilot failure must be analyzed and lessons learned must be incorporated into a revised program plan. A second pilot may be needed to validate the new plan and assumptions before full-scale deployment is given further consideration. In a survey recently conducted by Accenture of its Skills to Succeed partner organizations, the average time between the conclusion of the pilot and the launch of the full-scale program was 3.2 months (the gap never exceeded 12 months).

Program roll-out processes for digital learning follow the same guidelines as other organizational program roll-outs, whether digital or otherwise. The key steps include (Accenture, 2015):

- Update the pilot plans and business case assumptions with lessons learned
- Due to the longer time frame of the full program, maintenance elements (like technology updates and instructor re-training) can become key for long-term program relevance and must thus be modeled in detail to project accurately.

Create an implementation plan for the full program and launch the program according to the blueprint

Key activities must be included, along with associated stakeholders, roles and responsibilities and milestones for completion:

- Program roll-out (phased deployment plan for the program as a whole as well as each partner site)
- Communication strategy (make all stakeholders aware of their roles and responsibilities through clear communications)
- Training activities
- Support activities (remain in close contact with delivery partners through deployment to mitigate issues early)

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Video Transcript: Program Execution, Luis Arancibia
SECTION 5
Engage Stakeholders and Capture Value from Digital Learning
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.

Steps to Achieve

Tracking program progress and performance from day one is a critical component of successful digital learning deployments. Leveraging standardized tools and templates can save program managers valuable time and effort in doing so. Furthermore, by instituting a uniform approach to tracking across program sites and stakeholders, it helps create a more cohesive picture of the program status as a whole. Some of the key activities to include are (Accenture, 2012):

- **Leverage tools to oversee alignment across projects and ensure adherence to work plans and budget**
  - Tools to use include:
    - Work plan
    - Issue and risk trackers
    - Status update to report work plan and milestone progress.

- **Realize value against the business case**
  - Progress against business case projections must be tracked regularly and closely (both benefits and investments) to ensure digital learning implementation success. One of the major advantages of digital learning is the ability to track a large part of these metrics automatically through LMS capabilities. This is especially useful with learning metrics (e.g. learner engagement and skill level improvements) as these are often metrics that are difficult to measure and track manually.
  - The key metrics identified and committed to in the initial business case must be monitored throughout the deployment to check that progress is being made towards achieving return-on-investment (ROI) targets.

- **For each metric, the following must be established:**
  - Brief Metric Description
  - Definition/Calculation (unit of measurement, baseline value, expected trend, collection method, collection frequency, metric "owner")
  - If gaps are identified in terms of progress towards targets, the issue must be raised with program management and a mitigation plan must be developed (the Issue and Risk Logs above can be leveraged for this). If targets continue to look like they will not be met, they must be adjusted (with key stakeholder involvement and buy-in).
  - The program dimensions being tracked must be regularly reviewed to ensure their continued relevance.
Manage Change and Stakeholders

Change management is an often underestimated but absolutely essential part of a successful transition toward digital learning. It needs to be managed throughout the entire lifecycle of the program across all stakeholders.

Resistance to change has a crippling effect on business transformation.

- Accenture experience shows that resistance to change is the primary barrier to successful business transformations in organizations – ahead of factors like inadequate planning and lack of skills.

- A recent publication by educational expert Michael Fullen supports this finding, stating that the primary reason that digital learning initiatives underperform is inadequate focus on change management. He states that the gap between technology and meaningful educational change must be bridged by “bringing pedagogy, change management and technology together” (Bennett, 2012).

- Fundación Entreculturas’ experience also validates this point of view, having found that a program must do three key things to be successful with digital learning – invest in the necessary technical infrastructure, perform rigorous change management to facilitate cultural move towards digital learning and include some element of in-person training.

Steps to Achieve

Set up the organization for operational success under the new digital learning model

- Update organizational metrics to align with the digital learning initiative’s goals and objectives

- Develop training programs to ensure that processes and technologies associated with the transition to digital learning are incorporated into the organizational culture (click here for more information)

- Build/recruit the competencies, processes and capabilities necessary to operate the new organization using proven performance management and development tools.

Build buy-in and monitor the transition closely

- Consult and communicate extensively with all impacted stakeholders to ensure they understand the need for the change that is planned

- Design and manage a structured process of knowledge transfer across all stakeholders to ensure the rapid spread of needed proficiency related to the new digital learning capabilities

- Plan for and monitor program performance during the transition period in order to ensure stability. Identify transition risks early and contain them.
SECTION 6
Continuous Improvement for Digital Learning Programs
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.

The continuous improvement feedback process works best when designed at the start of the program and implemented throughout its execution. To monitor program performance throughout its lifecycle, some critical questions to constantly ask include (Bailey, Ellis, Schneider, Vander Ark; 2013):

- What is working better than expected? Not as well?
- Are we achieving the expected benefits?
- What should we be doing differently?
- How will lessons learned be documented and who should they be shared with? How can they be incorporated into the program moving forward?

Gather feedback

It is important that stakeholders understand the importance of regular data collection to program performance. Data exploration must become a routine part of daily work so that reflection upon program progress becomes habitual.

Some data collection will likely have to be done manually, but the process should be automated as much as possible – this reduces the burden of data collection effort for program staff and minimizes the risk of human error. The metrics against which data is collected must also be revisited every several months to ensure their continued relevance in providing meaningful information of program performance (Accenture, 2012).

Integrate the feedback back into the program

Having timely access to data on the program's performance allows for troubleshooting and corrective action to take place as issues arise in order for program objectives not to be compromised. It is important to not only look at data in absolute terms but also analyze trends of program areas that are improving/degrading – this helps to get a clearer understanding of issues and prioritize them (Clemons, 2013).

It is also important to note that program data analysis is important even when there are no major red flags. It can uncover important areas of opportunity that were not previously known, allowing the program to improve its results relative to the initial plan.

Key elements for successfully leveraging the collected data to improve the learning program include (Rosenberg, 2013):

- A culture of inquiry across the entire organization
- Mechanisms for organizing and sharing the data
- Realistic and incremental program improvement goals.
<table>
<thead>
<tr>
<th>Common obstacles to data collection</th>
<th>Potential solutions to obstacles</th>
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<tr>
<td>Unclear expectations for data communication</td>
<td>Establish regular and open dialogue with all stakeholders and funders in order to ensure that the program is front-of-mind and continues to meet objectives</td>
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<tr>
<td>Inter-personal challenges hindering the data collection process</td>
<td>Schedule program status reviews even when there are no obvious changes or problems to ensure that it stays on-track and that best-practice knowledge is shared regularly</td>
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<tr>
<td>De-prioritization of the project by key stakeholders</td>
<td>Embed a template in the program plan in order to ensure that formal feedback is collected in a structured format with clear, actionable content dimensions</td>
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(Accenture, 2012)
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.

As part of this research and how-to-guide, we have produced several tools to assist in putting some of the concepts to use in a digital learning program.

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<td>Program Delivery Timing Matrix</td>
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Video Transcript: Digital Learning Circles

[Toolkit]

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[Section 2: Design Effective Educational Content]
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[Section 5: Engage Stakeholders and Capture Value]
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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

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