E-learning for the Children's Workforce

A Managers Guide

Contents

1 Building the business case

A strong business case will help you to obtain senior management sponsorship for your e-learning project.

1.1 *What you need to achieve:*

- Establish a clear vision and associated objectives for the introduction of e-learning.
- Identify and prioritise strategic opportunities for e-learning.
- Produce an analysis of the potential organisational impact associated with each of the strategic opportunities.
- Create a detailed list of objectives for the year.
- Evaluate alternative approaches.
- Identify costs and return on investment.
- Establish cross-functional e-learning project team to agree scope, scale and subject matter for pilot project.

1.2 *Some factors to consider:*

- Key business objectives/drivers.
- Changing operational environment.
- CCIS implementation/compliance.
- Perceived training overload.
- More PAs working remotely.
- Internet access available to PAs.
- Need for consistent standards.

1.3 *Know your business-case building blocks*

A business case is a request for project investment. It's not a project plan; that comes later. The business case identifies the costs and returns of a proposed project and compares it to other possible investments.

Want to increase your chances of project acceptance? Prepare a complete, persuasive business case. Here's how to do it.

1.3.1 Provide a rationale.

Present a succinct description of the proposed online learning project. Doing so serves two purposes. One, it reassures the sponsor that you understand the request. Two, business cases are occasionally distributed outside the organisation for review, so a description helps familiarise outsiders with the project.

1.3.2 List all constraints and criteria.

List all constraints affecting the project, such as schedule and budget. You should also list quality constraints. For an online learning program, for instance, a course developed for commercial use may need to be of a higher visual quality than one developed for internal-use only.

For technical constraints, consider the requirements for authoring systems for in-house development in comparison to the use of third party specialists. Finally, list and prioritise criteria for alternative solutions. For instance, of schedule, cost, and quality--which is most important?

1.3.3 Present relevant alternatives

Research all options, then show how each addresses the project constraints and criteria. For an online learning program, that may mean researching traditional classroom training and instructional television, for example.

1.3.4 Investigate all component costs.

Component costs may include instructional design services, development services and/or authoring software. Many learning project proposals inadvertently omit one or more of these costs. For example, development costs for classroom courses are admittedly lower than those for most online learning projects, but delivery costs are much higher. Some business cases focus on development costs. Others omit key delivery costs, such as the reduced time usually required to take online learning courses.

You should provide realistic estimates of component costs based on your research. Use salary surveys to calculate labour costs, and contact publishers and resellers to estimate software costs. List costs in a table so that potential sponsors can compare component costs for each alternative side-by-side. Note, too, that some costs are not financial. Anticipate responses to each alternative, and address them in the business case.

1.3.5 Provide realistic return projections

So often, business cases present one projected return, and that often represents a best-case scenario. For example, a course proposal might assume one level of enrolment, though that might range from low to high, in reality. Instead, you should present three or four potential outcomes, including a worst- and best-case scenario.

1.3.6 Keep it simple

When possible, explain technical concepts in terms familiar to the potential sponsor. Language can create a barrier to technology, so never assume that your audience knows what you do. If the sponsor cannot understand a proposal, he or she can't support it.

1.3.7 Acknowledge sponsors' needs

Sponsors often initiate a proposal request by identifying project requirements. In some instances, they also outline solution components. Consider these components project requirements, much like a "drop dead" date in a schedule or a "not to exceed" amount for a proposed budget.

In some instances, the solution the sponsor proposes may not be in his or her best interest. Propose it as one option, then propose your alternative and explain why that one better addresses the problem. For example, suppose a sponsor declares that an online learning program must be completed in four months, but based on your understanding of the project and the current status of the material, you believe that it will take six months. Propose a schedule that assumes the project will be completed in four months, but also propose a "what if" schedule with a six-month timetable. This way, you acknowledge the sponsor's needs and demonstrate that you listen.

1.3.8 Make a recommendation

When you recommend a course of action, reiterate the full cost of the project, the range of potential benefits, and the human issues to consider when implementing a solution. Just as a mutual fund prospectus is intended to help convince a potential customer to invest, so a business case is intended to convince a sponsor to invest in your project.

Admittedly, each sponsor responds to different concerns and presentation styles. But by repeating the rationale, listing the constraints and criteria, researching all possible alternatives, providing a complete list of component, projecting a range of benefits for each alternative, providing adequate explanation, and acknowledging the sponsors' needs, you are likely to have a ready answer should an executive play "what if" the next time you present a business case.

1.4 Return on investment (ROI)

The foundation for establishing ROI is good metrics. The following is a list of training results that can be measured and then translated into financial terms:

increased:

- accuracy of information
- quality of service
- number of interventions
- productivity
- customer satisfaction

decreased:

- classroom time
- travel expenses
- printing and distribution costs
- employee turnover

2 Identifying and overcoming barriers

In a recent poll, Forrester Research identified these three most common obstacles to a successful e-learning strategy:

- lack of interactivity, 56 percent
- cultural resistance, 41 percent
- lack of bandwidth, 36 percent.

Much has been said about e-learning's interactivity and bandwidth issues. But subtler and more frequently ignored issues revolve around the human side of e-learning implementation.

Traditionally, e-learning implementation strategies have focused on technical issues. However, the human element is the most influential aspect of any technology solution. Technical infrastructures can always be upgraded or replaced; altering human perceptions and attitudes requires almost divine intervention. Thus, the success of an e-learning program depends on the people using it. That's especially true for enterprise-wide solutions that represent a significant change in the work process and the role of learning within an organisation. It's a well-known fact that a majority of people resist change regardless of its benefits.

So what's to be done? The motivators that cause people to embrace change are multidimensional. In order to understand how e-learning initiatives succeed, it's necessary to first understand the obstacles that cause failures.

2.1 Organisational obstacles

Numerous cultural issues can affect e-learning adoption in organisations; four of the most significant are:

- the accepted use of computers for job tasks only
- an "if it ain't broke, don't fix it" mentality
- an unwillingness to invest in new technology, especially for training-related activities
- a love/hate relationship with training.

Many organisations have an unspoken policy that any type of computer use outside of **daily job functions** is not allowed. Extensive use of the corporate intranet or Internet is often considered unrelated to the job function and, therefore, unacceptable. What's the likelihood of a successful e-learning initiative in that environment?

That type of corporate obstacle can be managed by public support from executive-level management. In addition to gaining management support, it's critical to have a well thought out plan for involving people throughout the organisation as stakeholders. These individuals can be engaged through advisory boards and focus groups and serve as an excellent resource for determining content, validating and testing, providing feedback, and championing the project among their peers.

The **'If it ain't broke; don't fix it'** mentality about training persists because many companies fail to ask questions about the bottom-line impact of a shorter learning curve or the ways in which increased accuracy and improved quality can affect costs. Organisations spend millions of pounds to install ERP systems that promise increased productivity by integrating operational information into one system. But when it comes to **investing in new training technology,** people often resist. Historically (or maybe hysterically), training has been considered an expense rather than an investment. Management knows they have to train their people, but are loath to allocate the resources to do so. Consequently, their **love/hate relationship with training.**

2.2 Learner obstacles

Learner obstacles to an e-learning initiative can be harder to pinpoint than organisational obstacles because people often keep their opinions to themselves. Attitudes towards training and technology run the gamut from enthusiasm to utter fear and loathing. Here are some obstacles to watch for:

- resistance to taking on the responsibility for one's own learning
- preference for learning through social interaction
- fear of others having access to personal information
- desire for direct access to experts
- discomfort with learning new methods and tools.

Suggestions for managing those learner obstacles are found in the chart below.

Obstacle	**Method for managing**
Resistance to taking on the responsibility for one's own learning	Well-designed e-learning demands interaction, critical thinking, and synthesis. The learner cannot simply "check out" mentally as he or she might do during classroom training. Positioning e-learning as an extension of job responsibilities can help reduce resistance to taking on the responsibility for learning. Make self-paced learning fun and integrate learning accountability into performance appraisals. There needs to be individual accountability for all learning regardless of the delivery method.
Preference for learning through social interaction	Create collaborative work groups (online and offline), online chats, threaded discussions, and live collaborative learning events via phone. The telephone is still a sophisticated piece of technology; take advantage of it.
Fear of others having access to personal information	Demonstrate security measures and tell people how their information is being used and who has access to it. Treat all information as sensitively as HR.
Desire for direct access to experts	Incorporate "e-mail the expert" or hold Webcasts. E-learning actually offers more opportunities to access experts, via email and other collaborative methods.
Discomfort with learning new methods and tools	Keep it simple. Once people take the first step, the subsequent ones are easier.

Those obstacles represent the tip of the iceberg. You will need to conduct a thorough needs assessment and factor the findings into your solution. There's an old saying that may be helpful to remember: Lemons can always be used to make lemonade - just add sugar. In other words, if your needs assessment reveals obstacles and points of resistance, you can work to leverage them so they contribute to your overall strategy rather than serve as deterrents.

Successful implementation of an e-learning initiative is a massive undertaking. The monetary investment can be significant, but it has the potential to generate up to a 400 percent ROI and increase the Partnership's overall productivity and performance. Remember that, ultimately, the success of the system is up to the individuals who use it. Integrating the human element into your e-learning strategy is the most overlooked, and yet the most critical, step for an enterprise-wide solution to fulfil its promise. When individuals succeed at their jobs, the Partnership will realise its business goals.

3 Design and development

In the design phase, the outcomes from analysis are used to create a blueprint for the instruction. This blueprint, called a design document or design report, covers the training need, instructional strategies, content, and creative treatment. The document is used to communicate with all members of the development team and is invaluable for keeping the project on track and focused on the real training goals.

3.1 Determine learning objectives

The first step in the design phase is to examine the tasks or subordinate goals that were listed in analysis and from these create a set of behavioural learning objectives. Objectives should be short, specific, and testable.

For example, let's assume that a task analysis for a CCIS (Connexions Customer Information System) training program reveals that new PAs have three needs:

- To understand the benefits of a CCIS and the main principles that the system has been designed to support.
- To know how to access and navigate the system.
- To be able to record customer information accurately.

Corresponding learning objectives, which are specific and testable, might be written as finishing the sentence: "After completing this course the learner will be able to:

- List the main benefits of a CCIS in relation to the Customer, the Connexions Partnership and the PA.
- Identify the main areas of the CCIS and list the main components of the client record.
- Identify what information is held in each of the sections of the client record and explain how to update that information.

3.2 Develop a content outline

Learning objectives determine the actual content of the program. After reviewing source materials and/or interviewing subject matter experts, a content outline is developed. The outline provides a lesson-by-lesson breakdown of topics, as well as a summary of any motivational strategies that will be employed.

The content outline lays out a plan for the sequence of instruction. The order of information depends on the subject matter at hand but typically goes in sequence from beginning to end when process is being taught, and from easy to hard when concepts are being taught. A common exception is to begin with an overview lesson that presents the big picture before going into the details.

One of the strengths of the Instructional Systems Design process is that it excludes background information and tangential content, which might be interesting but are not related to the specific learning objectives at hand. By paring down content, development time is reduced, learning time reduced, and retention of relevant information increased.

3.3 Indicate practice activities

In addition to presenting content, the design document specifies the strategies for practice. Practice and feedback are critical elements of effective instruction and should be planned carefully.

Although the specific activities themselves are not created until the development phase, a general description of practice should be given. The design document might include brief descriptions of simple questioning (multiple choice, true/false, or fill-in), simulations, instructional games, on-the-job application exercises, or situational analysis activities.

3.4 Specify technology and media

In technology-based training, the availability of CD-ROMs, audio speakers, bandwidth, and plug-ins often help determine the choice of media. The design document formally identifies the learners' available technology, which drives many of the implementation decisions later in the project. This specification should include not just what is available, but what is allowed by an organisation's information technology department. Sometimes technical specifications expand into the choice of development tools, including specific authoring systems, databases, or student-tracking systems.

The choice of media should also be justified from an instructional standpoint, too. Just because a computer can display video does not mean video has to be used. In fact, many designers with a video or instructor-led background overuse video. Audio narration with appropriate graphics and interactivity will always be a better choice than "talking head" video clips that are passively viewed.

3.5 Determine user interface and creative treatment

The graphical user interface is the critical link between the student and content. The design document spells out the buttons and navigational features that will be available, what their labels or names will be, and where on the screen they will be located. Ideally, a web designer creates the actual screen designs and these images can be embedded within the design document.

The list below indicates commonly prescribed interface items:

- Next button, which advances to the next screen.
- Back button, which moves back to the previous screen.
- A screen counter to indicate progress through a lesson.
- Menu button to jump directly to the Main Menu.
- Exit button to exit the program.
- Glossary to access an online glossary.
- Help to access context-sensitive information, or navigational assistance.
- Notepad for recording student notes.
- Bookmark to tag the existing screen for future quick access.

The interface section of the design document should also describe or show the look and feel of the program. With consideration of the learners' profile and the client culture, the visual treatment can be a conservative, functional screen, or something more creative. Training programs use a variety of metaphors or themes to increase student engagement. Among common examples are the science fiction adventure, James Bond espionage, film noir mystery, music video, TV game show, simulated work environment (virtual reality), and animated cartoon host or narrator.

3.6 Final sign-off

Once all revisions are made, the "client" should officially approve the design document as the blueprint for the entire program. If you are managing a project inside an organisation, the internal client, such as your boss or the project contact in the sponsoring department, should sign a release document (or at least acknowledge approval in an e-mail or memo), so that the other phases of the project can proceed, based on the design document. If you are managing an outside vendor, you should provide written approval of the design. This final acknowledgement step helps to communicate the importance of the design, and the fact that changing the program at a later stage of development will be considered out of scope.

The single most neglected topic in the field of e-learning is the interaction between students and computers. Typically instructional design and the creation of media assets receive the sole emphasis, while crafting an effective interface between the student and the content is left to chance. Often when students complain about computer-based training or express a preference for classroom-based instruction, it's not the training they object to, but rather it is confusing menus, unclear buttons, or illogical links that scare them off. The success of any training program is largely dependent on the student's own motivation and attitude. If a poorly designed interface has them feeling lost, confused, or frustrated, it will become a barrier to effective learning and information retention.

The culprits behind bad interfaces are the designers themselves. Just as it is difficult to proofread your own written work, many designers, artists, and programmers are just too close to the program to have a "beginner's mind" when they try to create easily used training programs. When building the program from the ground up, they sometimes assume that it is clear what each on-screen button does, and how the content is organised. The good news is that the most common errors are easily observed and remedied - if you know what you are looking for.

3.7 What is the user interface?

Generally you can think of an interface as anything that enables a person to interact or use something. A vending machine has a simple interface; a series of buttons, large or small, lighted or not, that allow you to make a beverage purchase. A car has a more complex interface, including accelator, brake, and steering wheel that enable the driver to control the vehicle. A computer's interface is the keyboard, mouse, and software that appears on the monitor and enables you to use the computer to perform a wide array of tasks.

Since the initial release of the Macintosh computer and subsequent development of Microsoft's Windows software, most people automatically think of a graphical user interface (GUI - pronounced gooey) when they think of an interface. Although the use of on-screen visual objects goes a long way toward making computers easier to use, they are only part of a menu of items that dictate user-computer interactions: menus, language, options, screen layout, commands, and even the relationships between visual objects.

3.8 Common user frustrations

Interface design flaws can be found in all kinds of software. These flaws, while not necessarily consciously noticed, make the software more difficult to use. What are some of the specific complaints that students express when working with courseware that has a poorly designed interface?

"What am I supposed to do now?" This frustration often is the result of poor instructions or a lack of visual cues. Sometimes the title screen is programmed to remain on-screen until the student presses a key to continue. But without a prompt, the student waits and waits. Some linear tutorials that use audio narration don't provide guidance as to when to move forward in the program. Students will click forward prematurely during a long verbal pause, or will linger too long, waiting for more audio to begin.

"Did I finish everything there is?" Students are feeling this anxiety more than ever before with the move to Web-based training. Unskilled developers sometimes provide too many hyper-links to various locations in the program and offer too many layers of content. Without a recommended path of navigation or an excellent tracking system, students find themselves "lost in hyper-space".

"How do I get out of this thing?" With technology-based training, students have the flexibility of accessing it wherever and whenever they want. This means they might need to exit the program quickly - to respond to an urgent task at work, or perhaps to attend to a crying baby at home. Without a clear and easy exit path, students can feel "stuck" inside the program and might be reluctant to use it as a just-in-time resource in the future.

"What's it doing? Is it hung up?" Computers can be slow to process large programs, they can "crash," or simply "freeze." Computer slow-downs typically occur during software installation, accessing student records in a database, or when performing some kind of calculation. Crashes and freeze-ups occur when the computer gets conflicting messages that it can't process. Some of these technical glitches are unpredictable. But some student anxiety can be anticipated and eliminated by simple messages that inform the student what the computer is busy doing, for example, "Loading program, please wait." Without adequate information, students are likely to assume the worst, and may shut off the computer thinking that it isn't working properly.

Remember that if you do everything else right, but have a bad interface, your learners will be confused, frustrated and will not learn. Ensure that designers are following good UI design principles and that interface feedback is observed and sought during pilot testing.

4 Learner assessment

Assessments are the foundation of effective instructional practices and return-on-investment studies. The power of tests and assessments will become exponentially more important with the advent of content management systems and learning management systems. Course developers can take advantage of assessments as a means of driving advanced learning practices, such as branching and personalisation. Operational managers can use assessment results as a basis for mentoring and developing team members.

In addition to offering a variety of instructional practices, data from testing can be used to conduct item analysis and strengthen courses. Indeed, often it's test questions that drive the following instructional practices:

Posttests assess a learner's mastery of content at course completion. For example, after taking a course on basic data protection principles, learners are given a 25-item test to assess their understanding of key concepts. Test data is used to determine whether the learner mastered the principles, and a comparative review of scores can determine course effectiveness.

Pretests assess the learner's readiness for instruction and can exempt learners from studying material they already know. Before starting a course on CCIS for instance, the learner is given a test to determine what he or she already knows about using the system. Test data will let learners skip modules they already understand.

You don't have to search the Internet very long to find stunning examples of bad tests. Meanwhile, test-building tools have never been easier to use or more accessible, making it possible for anyone to author a test. But ease-of-use and accessibility come with a risk: Technically appealing tests may not be good educationally.

Online test-building tools have the same problems as traditional pencil-and-paper tests plus some new problems introduced by technology. The most common problem with online tests is failure to link questions to the course objectives. It's important to determine if an objective that reads "the learner will be able to use, apply, calculate, build" is tested with an item that assesses the learner's ability to use, apply, calculate, and build. However, it's challenging to verify when objectives link to test items because manoeuvring within a course can be difficult and time consuming.

An obvious problem with online tests is the inadequate number of questions that assess the learner's mastery of the content. Many online courses use only one or two questions for each objective, which often are recycled from the practice items. Too few questions may fail to accurately assess the learner's level of comprehension. The questions must proportionally test all content presented, and questions should range from simple to complex. That kind of breadth provides a fair assessment of the learner's mastery.

Another common problem is that online tests tend to disproportionately assess memorisation. Many questions simply ask learners to identify, find, select, and define items using true-and-false or multiple-choice answers. It's easier to write those types of questions, but many courses require learners to gain high-level skills, such as applying, analyzing, synthesizing, and evaluating. When high-level skills are the goal, memorisation questions are inadequate at assessing the learner's mastery.

These problems are compounded when course developers chose to use bells and whistles without understanding how those features affect the assessment. For example, many systems offer a timed-test option, but course developers aren't clear about when to use it. Basically, if a timed performance isn't required, developers shouldn't use it. Likewise, graphics and animation may be interesting graphically, but they're a distraction if they don't add content to the test.

4.1 Building online tests

Test-building software is simply a tool. The basic principles are the same when writing online or paper-and-pencil tests. But software to create online assessments is getting more sophisticated, as are the reports they generate. If you want to perform statistical tests for reliability and validity, these programs offer useful tools. However, they also have the potential to increase the GIGO quotient (garbage in/garbage out).

Here are some tips for writing solid test items

True-and-false questions are best for testing memorisation of factual information. These questions are generally easy to write. If you find you have several true-and-false questions, check whether memorisation is a course objective. If memorisation isn't the goal, consider developing other test items. To develop true-and-false questions:

- write one true-and-false statement for each fact the learner must memorise
- test only significant facts rather than trivia
- use statements that are unequivocally true or false
- write short statements
- eliminate unnecessary detail that may confuse learners
- avoid negative statements and double negatives which can add an unnecessary cognitive burden.

Multiple-choice questions test facts and the application of knowledge. These questions are more difficult to write, but they're the foundation for branching, item analysis, adaptive learning, and personalisation. To develop multiple-choice questions:

- test only one piece of information per question
- use only plausible distracters
- use four or five distracters
- avoid using answers that can be easily eliminated
- review questions for inadvertent clues
- be sure the software supports partial credit answers
- avoid using "all of the above" and "none of the above" answers as distracters. If you use them, make "all of the above" and "none of the above" plausible answers.

Fill-in-the-blank questions test facts or the application of knowledge. These questions are challenging to write because limitations in some packages accept only an exact word or phrase. To develop fill-in-the-blank questions:

- write questions that have a single answer
- keep in mind the software's limitations
- use only one blank per question
- use fill-in-the-blank when you want the learner to recall information rather than select or identify information
- consider the risk of spelling and debatable answers. If the system can support a range of answers, be prepared to manually review and grade responses for fairness.

Matching questions test for memorization, and are considered a variation on multiple-choice questions. To develop matching questions:

- check the screen layout; items should fit on the screen without scrolling
- consider the effect of different screen resolutions
- avoid using software that draws connecting lines between items
- note whether learners can use the same distracter multiple times

- provide more possible distracters (answers) than stems (terms to be defined). When the columns are of equal length, learners can guess the answers through process of elimination.

5 Pilot program

Also known as an Alpha test or formative evaluation. A version of the training program is delivered to a sub-set of the target audience for an evaluation of its instructional effectiveness. Also known as a very simple step to help avoid disaster, which is forgotten on the majority of projects.

5.1 Choosing what to pilot

Some types of content are more suitable for online delivery, while other content areas are more effective when delivered through classroom instruction. Training professionals who participated in a recent study described a variety of learning situations in which e-learning is a more effective way to deliver training than classroom instruction.

E-learning Content

- Short, targeted, task-driven, and episodic content
- Content that needs frequent updating
- Information delivery
- Managing the learning process (class schedule, orientation)
- Performance assessments
- IT-related topics

Classroom Content

- Longer, broad, and programmatic content
- Topics that require face-to-face interactions
- Complex or new topics
- Business problem solving
- Expert observation
- Culture building
- Networking

For instance, most organisations using e-learning have transferred knowledge-based activities that don't require face-to-face interactions into their online learning systems. Those activities range from entire distance learning programs to diagnostic assessments and evaluations, certification programs, and tests. Practitioners feel that e-learning is most effective when learners need information rather than instruction. In addition, because e-learning is capable of connecting a geographically dispersed audience, it's an effective way of building learning communities and enabling employee networking.

Off-the shelf v. bespoke content

Off-the-shelf		Bespoke Content
Generic	**Connexions-specific**	
Standard Information Systems (Microsoft Word etc.) Generic Skills (Interviewing Techniques etc.)	Introduction to Connexions Understanding Connexions Special Educational Needs- Guidance for Personal Advisers Assessment, Planning, Implementation and Review Guidance for Personal Advisers Data Protection for Connexions Staff CCIS Principles	Induction Company Standards and Procedures Your CCIS

6 Managing learning activity

There are many different Learning Management Systems (LMS) and Learning Content Management Systems (LCMS) available.

In essence, an LMS is a high-level, strategic solution for planning, delivering, and managing all learning events within an organisation, including online, virtual classroom, and instructor-led courses. The primary solution is replacing isolated and fragmented learning programs with a systematic means of assessing and raising competency and performance levels throughout the organisation. For example, an LMS simplifies global certification efforts, enables companies to align learning initiatives with strategic goals, and provides a viable means of enterprise-level skills management.

The focus of an LMS is to manage learners, keeping track of their progress and performance across all types of training activities. It performs heavy-duty administrative tasks, such as reporting to HR and other ERP systems but isn't generally used to create course content.

In contrast, the focus of an LCMS is on learning content. It gives authors, instructional designers, and subject matter experts the means to create e-learning content more efficiently. The primary business problem an LCMS solves is to create just enough content just in time to meet the needs of individual learners or groups of learners. Rather than developing entire courses and adapting them to multiple audiences, instructional designers create reusable content chunks and make them available to course developers throughout the organization. This eliminates duplicate development efforts and allows for the rapid assembly of customised content.

LMSs and LCMSs enjoyed high prominence during the 1999 to 2001 timeframe. They became the must-have application for sophisticated enterprises wanting to get into e-learning. But they ran into the classic Silicon Valley trap of too many features and not enough functionality, overselling and under performing, alienating customers and trapping themselves in maintenance mode.

LMSs are critical to understand and deploy learning, and most organisations should have them in some form. But ultimately, they become supporting players in the value chain that brings the right learning to the right people at the right time. Otherwise, while we need learning management, we might not need learning management systems.

For quick gains and value for money, find a solution that is hosted externally and focuses on the following key areas:

- Manages e-learning - including tracking registration, course completions and learner scores.
- Creates test questions and test administration.
- Creates simple courses.

7 Case study - Igen

7.1 Objectives

Aspire.NET, a new Internet-based version of the Aspire CCIS was to be implemented at Igen in order to provide more flexible access to the Aspire CCIS database and ensure compliance with the CSNU CCIS specification.

In order to implement the system, Igen needed to train more than 100 existing users of the Aspire Windows software in the use of Aspire.NET and provide a framework that would enable ongoing self-paced, just-in-time training and support for existing users and new staff.

Aspire Business Solutions have in the recent past delivered Aspire training to Igen staff. Although this has always been to the satisfaction of the company, with the introduction of the new Aspire.NET software a new approach was sought.

Rather than delivering the training in the traditional all tutor-led method, a plan was developed to deliver blended training for the implementation of Aspire.NET There were a number of issues that were taken into account when developing the plan. These were:

- E-Learning – Igen and the Aspire team discussed their interest in developing e-learning. Aspire.NET training offered an ideal opportunity to put this type of training into practice as IT training is established as being one of the best subjects to deliver via e-learning.
- Training Schedules – Igen had a considerable training requirement to roll out the Aspire.NET software and for ongoing training of new staff. Staff and managers had concerns about the amount of time attending training could take out of operational working. The plan needed to address these issues. Staff should be able to participate in some of the training in bite-size modules, which can fit around their other commitments.
- Training Resource, Effectiveness & Costs –There are savings in training staff time and therefore costs both in the short term to roll out the new system and long term for ongoing training. From experience and general learning theory the multiple exposures this blended method of training gives to Aspire.NET should result in more effective training for staff.

The main learning objectives of the program can be summarised as follows:

After completing the program the learner will be able to:

- List the main benefits of Aspire.NET relating them to the Customer, the Connexions Partnership and the PA.
- Identify the three main areas of Aspire.NET and list the thirteen sections of the client record.
- Explain the purpose and use of each of the eleven components of the My Aspire home page.
- Identify what information is held in each of the sections of the client record and explain how to update that information.

7.2 Plan

7.2.1 Overview - There would be three phases to the training.

	Time Required	Subject	Location/Method
Session 1	Approx ½ day 1 ½ hours for Aspire.NET training	Introduction to Aspire.net and Training CCIS changes Company issues	In Teams – Tutor led with staff participation
Session 2	½ day total (5/10 minute modules)	Using the system	E-learning - anywhere there is an internet connection
Session 3	½ day	Practise & Check Understanding	In HQ Training Room – Tutor led

Session 1
Delivery methods would be via presentation, demonstration, and discussion. Areas to be covered in this session would be:

- Introduction to the Training and E-learning
- Introduction to Aspire.net
- My Aspire/Caseload Management
- Aspire.net – Getting Started
- Introduction to CCIS Concepts like Role Based Security/Confidentiality
- Partnership Specific Element if required

Session 2
Delivery via e-learning modules accessed via the Internet. Areas to be covered in this session would include the following but may be broken down further. Staff progress can monitored in terms of where they are in the e-learning course.

Session 3
Delivery method would be tutor led and would mainly be via workshops delivered in the Training Room in groups of maximum 8 users. Areas to be covered in this session would be:

- Feedback from e-learning
- Basic Internet issues
- Practical Case Studies
- Setting up My Aspire searches

7.2.2 Timetable

Session 1
This first session was attended by most staff to give an awareness of the new system and new initiatives. They need not all then continue onto the practical end-user training covered by sessions 2 and 3 if they do not use Aspire directly.

There were 6 half-day sessions with approximately 16-20 staff in each session. The sessions would be delivered in teams where possible over a 3-day period.

Session 2
Access to the E-learning was given to appropriate staff after they had attended Session 1. This was self-directed learning completing the modules over a 2/3-week period. Users were directed to a hosted web site where they would logon and complete the modules as and when they could, to fit in with their other commitments. They would need to have completed all the e-learning modules prior to attending Session 3.

Session3
Staff would book a place for their Session 3 training when attending Session 1 allowing a period of time to complete the e-learning modules. The objectives of the session would be to review the learning from the e-learning modules, answer questions and check understanding mainly using workshops.

7.3 Design and development

7.3.1 Content outline

The e-learning element of the program will be delivered as two separate courses:

- Level 1 - dealing with basic operation of the system and simple updates;
- Level 2 - covering more advanced operations.

Each course is broken down into sections, or modules, accessed from a menu screen.

Aspire.NET – Level 1

1. Introduction
2. Getting Started and My Aspire
3. Client Search and View Record
4. Updating Record - Summary
5. Situations
6. Interactions and Activities
7. Qualifications
8. Aspirations
9. Docs, Notes and Assessments
10. Find Clients

Aspire.NET – Level 2

1. Additional Needs
2. Individual Circumstances
3. Consent
4. Contacts & Referrals
5. Opportunity Submissions
6. Benefits & Allowances
7. Administration
8. Appointments & Future Events
9. Group Sessions
10. Opportunities & Providers
11. Assessments
12. Key Clients
13. Add New Client

The learner must run through each section in order. Once they have completed a section they can move on to the next one. The learner can revisit any section at any time once it has been completed.

Completed sections will be marked on the main course menu.

A ‘<Back’ Button in the bottom left hand corner will take the learner back one screen.

A ‘Next>’ button in the bottom right hand corner will take the learner to the next screen.

At the top right hand corner of the menu screen there is a ‘Glossary’ button, providing access to a glossary of important terms which when clicked overlays the Glossary on the main screen content.

If the learner revisits any section, they will see two additional buttons.

Click on the ‘Information’ button to view the background information for that section.

Click on the ‘Simulation’ button to run through the software simulation.

When the learner first starts a section that they have previously completed they can choose to view EITHER the background information OR the software simulation. Once they have made your choice the section will operate in the normal way.

The number and title of the section chosen will be displayed in the top left in place of the course title.

Once inside a section the ‘<<Menu’ button will be displayed.

Clicking this button will return the learner to the menu. If they do leave a section without completing it, they must return to it and run it in full before they can move on to the next section.

The main area of the screen will display a simulation of the Aspire.NET software for the learner to interact with when instructed.

Not all elements of the screen are active at all times. The learner will be told what to enter or click at different times.

The learner must enter the information exactly as instructed.

An area to the left-hand side of the main simulation screen area will display important information for the learner to read.

Red lines and boxes will be used to highlight information on the screen.

This area will display instructions for the learner to follow.

Green lines and boxes will be used to highlight the area on the screen where action is required.

Once a navigational concept has been introduced and its use supported by explanation and green highlighting, further use will not be highlighted in green.

In simple terms, RED is for information, GREEN is for action.

7.3.2 Management functions

The e-learning material will be hosted on a dedicated web server provided by Dialog360.

Before accessing the e-learning service the user must enter a valid email address and optional password.

If the user enters a valid password and they are marked as an admin user then the admin menu will be presented to them.

Menu
This will have 2 sections – Available Courses and Administration.

Available Courses
This will be a list of courses that the user has been enrolled on. Clicking on the course name will take the user to the course, passing in their current status for that course – see Integration with courses.

Administration
The following options will be shown:

- Add Delegate – this will prompt the user for a Delegate name and Email address. It will create a record in the tbUser table using the company that the current user belongs to.

- Remove Delegate – this will show a list of delegates for the current user's company. The user can select the delegate(s) to be deleted. A confirmation page showing the delegates to be removed will be shown. Following confirmation the relevant records in the tbTracking and tbUser tables will be deleted.

- Enrol Delegate – this will present the user with a list of courses licensed to the current user's company. It will allow the user to select the required course(s). It will show a list of users belonging to the current company, it will allow the user to select the required user(s). For each course / user selected it will create a record in the tbTracking table. If a user/course combination already exists in the table then no record will be created and no update will take place.

Monitor Delegate Progress
This will take the user to the Delegate Tracking page.

Delegate Tracking
This page allows an administrator to monitor the progress of delegates. It is a flexible report that allows the user to view the data by delegate or course. The data can be sorted by clicking on the column headings.

Report Parameter Page
The report can be viewed by delegate or by course. The page will be split into 2 parts – one to select a delegate and one to select a course.

The list of delegates for the current user's company will allow the user to select a single one. A link will be available to take the user to the report.

The list of courses licensed to the current user's company will allow the user to select a single one. A link will be available to take the user to the report.

Report by Delegate Display Page
The Delegate Name will be shown at the top of the report
The report will show a list of courses for the selected user. The following columns will be shown:

- Course Title
- Last Module Completed
- Date and Time Last Module Completed

By default the data will be sorted by Course Title. Clicking on a column heading will sort the report by the selected column or change the sort order if the data is already sorted by that heading.

Report by Course Display Page
The Course Name will be shown at the top of the report

The report will show a list of Delegates for the selected course. The following columns will be shown:

- Delegate Name
- Last Module Completed
- Date and Time Last Module Completed

By default the data will be sorted by Delegate Name. Clicking on a column heading will sort the report by the selected column or change the sort order if the data is already sorted by that heading.

Integration with courses
Integration with the course content is required at 2 stages: When a delegate takes an option to enter a course and when the delegate successfully completes a course module.

Course Entry
On selecting a course the delegate is taken to a web page that has the initial course menu embedded.

On entry to a course the course needs to know:

- Who the delegate is.
- The delegate's current status within the course.

Module Completion
On successfully completing a course module the delegate's current status must be updated. This is achieved by the course issuing an http post to an asp.net page.

The form variables used to update the database are:

- course – the course the module belongs to
- login name – the email address of the delegate
- status – the number of the module just completed

The delegate's current status for the course must only be updated if it is greater than their current status on the database.

7.3.3 Assessment

Assessment modules will be produced for each of the Using Aspire.NET training courses; Level 1 and Level 2. The assessment mechanism will be designed to operate as a generic facility to enable on-line tests to be created, recorded and monitored by simple input of the required data into the Dialog360 database.

Data requirements
The questions, alternative answers and their values (correct or incorrect), will be input into the Dialog360 database. They will be passed to the course along with the existing variables each time the course is launched.

Each assessment record will accommodate up to 100 questions. The maximum length for each question will be 200 characters (including spaces) and the maximum length for each alternative answer will be 150 characters (including spaces). Questions and answers may also be, or include, a reference to an image file. There will be a maximum of 6 alternative answers per question one of which is the correct answer.

In order to create an assessment, the following items will be required:

Item	Description
Course/Assessment Title	Title of the course that the assessment relates to or the assessment title

For each question:

Item	Description
Question Title	Title to indicate the subject context for this question
Question text	200 characters (including spaces)
Question image	name of image file associated with question

For each answer (up to 6 per question):

Item	Description
Answer text	150 characters (including spaces)
Answer image	name of image file associated with answer
Answer value	correct or incorrect status for answer

Operation by the learner
Upon completion of each course the learner will be directed to undertake the assessment for that course. This will be in the form of a series of approximately fifty questions with multiple-choice answers. The learner will be required to choose an answer(s) for each question. Upon selection the choice(s) will be recorded by the software but no feedback provided to the learner as to whether the choice(s) is/are correct or incorrect.

Upon completion of the assessment module the learner will be presented with a set of results showing their overall score, i.e. total number of questions, total number of correct answers chosen, and the questions that were answered incorrectly together with the section of the course that they relate to.

The completion of the assessment module will be recorded in the database by incrementing the status by one (last module completed) for that user for that course. The date completed will also be recorded. In addition the following data will be recorded in the database:

a) total number of questions answered correctly;
b) answers selected for each question.

The learner can undertake the assessment as many times as desired. Only the last set of results will be stored in the database.

Reports
The ‘Monitor Delegate Progress’ reports will be modified to include an extra column to display a score (total number of questions answered correctly against total number of questions) where the last module completed is the assessment module for that course. Clicking on the score will display a screen containing the following:

- Delegate
- Course
- Date completed
- Score

For each question:

- Question Number
- Question text
- Question image
- Correct answer text
- Correct answer image

- Answer given text
- Answer given image

7.4 Outcomes

100 existing users of Windows Aspire trained in the use of Aspire.NET in a shorter time and at significantly lower cost.

The main benefits can be summarised as follows:

- Les disruption to working patterns of service delivery staff.
- Saved money.
- Established a library of e-learning materials that can be used by existing staff as required on an ongoing basis as refresher training and by new staff as part of their induction training.
- Implemented a framework for the delivery, management and assessment of on-line learning activities at Igen.
- Able to demonstrate full compliance with the CCIS specification.