



E-learning Authoring: The Shifting Landscape

Core Insights

The world of corporate e-learning content production is changing; companies are looking for faster and cheaper solutions, as well as greater impact in the workplace. The demand for custom e-learning has never been higher, but pressure on corporate budgets has also never been higher.

This Core Insights paper examines the main drivers shifting the e-learning authoring landscape, and the impact this is having on the strategies and tools being adopted by corporates as they try to meet these challenges.

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Elearnity Limited

Purlieus Farmhouse

Ewen

Cirencester

Glos. UK

GL7 6BY

Tel: +44 (0)20 7917 1870

Fax: +44 (0)20 7917 1871

Email: info@elearnity.com

Web: <http://www.elearnity.com>

About Elearnity

Elearnity is Europe's leading independent Learning Analyst providing independent expert research, analysis and advice on corporate learning, e-learning and learning technologies. We provide expert independent advice to help organisations accelerate and de-risk their corporate learning innovations.

All our services are underpinned by a unique independent expert understanding of corporate learning based on extensive research and independent market profiling. We provide two core services:

- Learning and e-learning Analyst Research with in-depth best practice research, strategic market analysis, news and commentary
- Independent Advisory Consultancy on strategy and best practice

Our research and analysis covers key innovations that are challenging corporate learning organisations; learning transformation, e-learning and blended learning, learning management strategy and systems, the impact of learning and increasing value-added, integrating learning within talent management and performance.

Elearnity's research process focuses on developing deep insights of corporate realities and best practice, and independent understanding of vendor capabilities and actual performance.

Our analysis and advisory process focuses on providing objective unbiased advice *specific to your organisation and business context*.

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INTRODUCTION

Why Focus On E-learning Authoring?

Over the last few years we have seen a growth in demand for e-learning content and at the same time an increased interest in approaches other than using specialist e-learning developers to create bespoke content. In some companies this has meant adopting a completely in-house production capability, and in others it involves both internal and external resources. Although this is a trend that has been in evidence for some time, the current economic crisis has increased the pace of change, and the effects are visible within established consumers of e-learning as well as new entrants.

To help you assess the requirements and options for e-learning authoring within your organisation, Elearnity is producing a series of papers, of which this is the first.

Each paper will cover a specific area of thinking:

- The Shifting E-learning Authoring Landscape
- Strategies and Development Models
- Tools and Technologies

It should be noted that the focus of this series of papers is on the production of what is normally considered to be 'e-learning modules'. It does not venture into the territory of blogs, wikis, forums and other user generated content. This is not because they aren't valuable tools (they are, and increasingly so), but because we have identified an increasing demand for new strategies and tools to produce traditional e-learning content. We also see a good deal of confusion over the options available, and the implications of choosing them.

The scope of this series of papers is specifically limited to the authoring of 'e-learning modules'. In discussing authoring tools we are referring either to tools specifically designed for the production of that type of e-learning content, or more generic tools that are commonly adopted for developing e-learning content.

Although our focus is on large corporate organisations, and this series of papers is based on Elearnity's independent research and experience in that area, much of the content of the paper will also be applicable to organisations of all sizes and types. We hope you find them useful.

Research Methodology

This Core Insights paper is based on information and analysis gathered by Elearnity through its research into the corporate E-learning Authoring Tools market. This includes input from:

- Conversations with many large corporate organisations in the UK, Europe and internationally specifically on this subject
- Formal research including corporate roundtable discussions and structured research projects looking at trends in corporate use of e-learning; including Content Authoring, Rapid E-learning and Learning Content Management
- Detailed advisory assignments with a range of major multinational organisations on their current and future strategy for e-learning content production

- Independent research and profiling of the leading authoring tool vendors and e-learning content vendors over many years

Structure of the Document

The Aim of this Paper

The aim of this paper is to provide an analysis of the current e-learning authoring landscape, examining the background from which new development models have evolved, and consider the developments that have driven and enabled change. It will lay a foundation upon which we will build in the later papers in this series.

Key Sections

The content of this document is split into the following main sections:

- Some initial context, with an overview of the authoring tools landscape and some key considerations
- The drivers for corporate organisations to move to alternative strategies for e-learning authoring other than the traditional outsourced e-learning development model
- The technical and other changes that have enabled such a fundamental shift in the e-learning authoring landscape
- A brief overview of the types of authoring tool available
- An overview of the new options available for e-learning
- An overall summary and recommendations

THE SHIFTING LANDSCAPE

Background

We only have to look back five years to see an e-learning landscape that was considerably different to today. E-learning was re-establishing itself as a key part of the corporate training arsenal, following the hype and implosion of the dot com bubble. Although some corporates had established their own in-house e-learning production facilities, the scale and costs of such undertakings meant that for most organisations the only viable route to follow was to outsource e-learning production to specialist 3rd party development companies; what we now think of as the “traditional outsourced development model”.

In essence, the entire development process was handed off to a specialist e-learning development vendor, who would manage the entire process from design to delivery. They would manage the project, design the look and feel, storyboard and design the content, and then deliver a tested, working e-learning course for the customer to deliver to their staff. The vendor would provide the whole production team, working with the customer sponsor and subject matter experts to design and development e-learning products specific for that customer.

This process can have many advantages, but it also has its limitations. For a start, it is expensive and time consuming. Using this “traditional” development model, individual e-learning courses have typically taken 3 months or more to develop, and cost £20,000 per content hour or higher. Whilst the use of 3rd party development was always a flexible resource (you only contract for it when you need it), it could also be a dependency, reducing a customer’s ability to keep courses up to date, without contracting with the original vendor to change the course for them, and hitting a bottleneck when that supplier was busy managing multiple projects for multiple clients.

The “traditional in-sourced development model” is in many ways similar to the outsourced model, with a specialist internal e-learning production team taking on similar roles to those in an outsourced team. Both approaches are specialist in their nature, and are distinct from both the business and the L&D function, albeit with a greater likelihood of increased visibility of the process with an internal team.

Over the past five years, more companies have started to experiment with the way they are producing e- learning content, including off-shoring production to reduce costs, and also by starting to look at alternative ways of producing or maintaining e-learning internally as well.

Evolving Tools and Processes

Elearnity has also seen considerable changes in the authoring tools market, with the introduction of a broad range of consumer-focused tools with varying levels of sophistication. The tools are continuing to evolve, with more capable versions being released each year. With entry level prices for some tools dropping below £500, and the increasing simplicity of tools seemingly removing the need for specialist developers, in real terms, the financial barrier to custom e-learning creation is lower than ever before.

Insights...

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The arrival of these simpler tools has also enabled the adoption of much a simpler and more rapid development process. The demand for a speedier development process has existed for some time, but it is only with improvements in the tools that we now see 'rapid' becoming increasingly the norm for many organisations. For more information on Rapid E-learning, see Elearnity's Core Insights paper on Rapid E-learning on our website www.elearnity.com.

That ease of use does come with one caveat though; certainly, you may not need to be a programmer to use them, but the tool will only ever be as good as the person using it. Someone lacking the necessary skills will no more be able to use the tool to produce worthwhile learning content, than possession of a copy of Microsoft Word would make them a successful novelist.

Evolving Expectations

The perception of what e-learning is has also changed. Typically it used to be the view that all e-learning must have high levels of interactivity and be very media rich; with the usual outcome being that each module was a bespoke creation. There is some evidence of a greater desire for more basic 'fit for purpose' content, that is instructionally sound but without all of the bells and whistles that most bespoke content comes with as standard. Some cite this simpler content as being less full of distractions and more focussed on the learning. Others just recognise the need for effective learning content at a viable scale and cost! This change though, is gradual, with many e-learning groups still putting media richness ahead of instructional integrity.

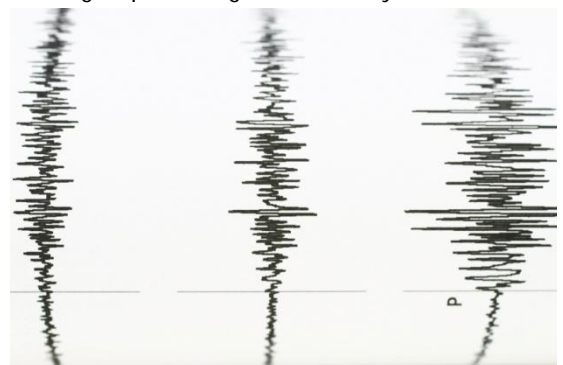
There has also been a move to a preference for smaller 'bite sized' pieces of learning, with 10-20 minutes of content becoming more the norm, rather than 1 hour plus courses. With its high production values and complex project management, the traditional model was far better suited to larger pieces of content, with an hour or more being common.

Historically, E-learning was often introduced at the same time as a Learning Management System (LMS), with the ability for detailed tracking and reporting of the content seen as a key benefit that could only be realised by using both tools. The expansion of content from typical compliance activity to more general topics has reduced much of the requirement for in-depth tracking, with simpler activity reports providing enough data to analyse the use and relevance of the content. Lower LMS costs and changing reporting requirements have reduced the infrastructure costs of an e-learning deployment, and lowered the total entry cost

A New Starting Point

As a result of these changes, there are far fewer barriers for first time adopters of e-learning, although that can present its own challenges. Elearnity has seen increasing instances of the entry point to e-learning adoption being the purchase of an e-learning authoring tool, although often without a clear strategy to support its use, or understanding of how make the strategy sustainable. Unstructured usage and unrealistic expectations of the tool's capabilities can quickly be demoralising. Whilst the current tools are easier to use than ever before, there is still a level of expertise and understanding required to get satisfactory results; especially satisfactory learning!

Overall, the advent of new tools, new models and (as a result) new vendors has resulted in a seismic shift in the corporate approach to e-learning production, impacting the majority of companies, whether new to e-learning or not.



DRIVING THE CHANGE

So what are the main drivers behind the shifting landscape, and how are they impacting how corporates approach e-learning production.



More for Less, and Quicker

Within every organisation there will always be specific reasons driving the adoption of e-learning authoring, but there are several broad factors, which to a greater or lesser degree, will influence that decision. When considering the drivers, the maturity of the organisation is also a factor; some organisations may be looking to adopt e-learning for the first time, others may be established users looking to improve their e-learning offering to keep pace with the demands of the business.

Economic Drivers

It's not surprising that most organisations cite economic factors in their decision to move away from an external production model. In some cases these are long term decisions that would have been made irrespective of the prevailing economic climate. Others have been driven by more immediate pressures, but this still often leads to longer term, beneficial changes.

The traditional e-learning cost of £20,000 plus per hour of content is now often not seen as being good value for money. For many companies looking to adopt e-learning for the first time, that kind of cost could easily be seen as prohibitive and likely to end any further consideration of e-learning as a solution.

Of the companies already using e-learning, the change in approach is broadly driven by one of two pressures; to deliver more and demonstrate better value with existing resources, or a reduction in budget or resources which forces the adoption of a new approach. In the current economic climate, these pressures have become much more apparent.

At the same time, short term challenges such as reduction in travel budgets has increased the demand for e-

learning as a delivery method. In many cases this has simply accelerated a change that was already happening, but that combination of increased demand and lower budgets is forcing companies to look for alternative solutions.

It's easy to assume that all of the economic drivers are connected with the current economic downturn, but this is certainly not always the case. For more mature adopters of e-learning, there may be no immediate threat of budget cuts, but rather a desire to increase output and value. This is something that can be seen in many organisations at the mature end of the adoption curve, irrespective of prevailing economic conditions.

Our research has also seen evidence of an increasing democratisation of learning; with a refocusing of existing spend from senior and middle management to the wider workforce. The increased audience size invariably leads to the requirement for a technology based solution.

Scalability

Beyond the economic imperatives, scale is frequently a driver for any form of e-learning adoption. Providing learning to large, widely dispersed audiences can be provided far more economically and quickly using e-learning than face to face interventions.

However, as the scale of e-learning adoption increases, the traditional outsourced e-learning model also breaks down. A model based on spending £20,000 per hour of content may have worked when there were only 10 pieces of content to deliver, but it doesn't scale to 100 or 1,000 pieces of content. And that's the challenge faced in many mature e-learning companies. Once e-learning has become accepted and gone mainstream, we need to significantly increase capacity to produce it, without a linear increase in cost.

An associated issue is that as the number of modules increases, so the audience size for each module may decrease. This changes the cost/benefit case on an individual piece of content significantly, because the costs involved can make it difficult to justify the use of the traditional e-learning production model for a small audience.

Speed of Development

In our conversations with corporate users, we found that more than any other non-financial driver, it was speed of development that caused the greatest dissatisfaction with the traditional model. This was nicely summarised in the view of one corporate who said they just wanted to "get it done, and get it online".

With the traditional model, development times of 3 months or more seem to be the norm, but some interviewees had experienced delays of 12 to 18 months between project inception and delivery of the final content. Needless to say, in some cases delays may be outside of the developer's control, but the majority of customers still believe that the development process is unwieldy and unjustified for straight-forward e-learning production.

For many organisations, even 3 months development time is now too slow. If the L&D Department is unable to offer a faster technology based solution, they must either fall back to more traditional, and costly, face to face interventions or risk business functions looking to uncontrolled external resources for support.

An internally-led production model can also be perceived as being quicker because it reduces the need for the contractual negotiations and complex project documentation that comes with many external vendors. An internal team can also be perceived as being better placed to capitalise on existing relationships and goodwill within the business. A good, well managed partnership with an external supplier can however bring similar benefits.

Management and Risk

As well as basic cost and time, increasingly decisions to in-source e-learning production or move to a hybrid model are also about risk and the ability to manage and sustain content assets longer term.

Dissatisfaction with External Suppliers

For many users, there is a simple dissatisfaction with traditional suppliers and the approach they take to production. Customers can often feel that they must sign up to a project management process that seems designed to slow down development. Whilst there is an acceptance that all projects must have boundaries, it can often seem that even the simplest of changes are subject to excessive documentation, change control and costs.

In fairness, there was a time when the programming of e-learning content was a complex procedure and developer time was at a premium. In those circumstances it was entirely reasonable for content vendors to have robust procedures in place to ensure projects and changes were tightly managed.

It is still of course entirely reasonable that a vendor should manage each project in such a way that ensures quality and means that the project remains profitable. But it is far harder to justify this approach when it is driven by the developer's choice of their own proprietary tools. The ability to use the new wave of authoring tools to quickly develop prototypes using an iterative and agile approach explicitly reduces the need for complex sequential project management processes and documentation. As organisations see increasing evidence of the success of such approaches, it becomes harder for suppliers to justify the incremental time and cost of traditional approaches.

Maintenance

The ability to maintain content internally, removing the need to incur more external costs, has often been cited as a key benefit of the internal or rapid production approach.

In reality, the reduced costs associated with rapid production models means that often the resulting e-learning content is often viewed as disposable. If so, when it's no longer relevant it has to be thrown away. This approach takes the view that it was the need to demonstrate a reasonable lifespan based on the high up-front investment level for traditional content that was the driver for worrying about maintenance.

Whilst partly true, the assumption that all content is disposable is probably both naive and incorrect. A lot of e-learning content is associated with core compliance, product knowledge and process learning, and these needs do not go away, but specific requirements, information and guidelines contained within this e-learning does change.

The ability to self-maintain their content without having to re-contract with vendors to make changes is therefore attractive to many organisations that have a large investment in e-learning. Self-maintenance also gives companies greater independence from the original vendor, allowing them to get internal or contracted resources to change and update the content.

Where a maintenance strategy is in place, it is often one of the early casualties in any effort to reduce costs. We would argue that when costs are tight, better management and maintenance of existing content is likely to be more cost effective than the creation of new content that may duplicate previous work.

Standardisation and Sharing

Whether production is internal, external or a combination, many organisations are now extolling the benefits of standardising development around a mandated e-learning authoring tool. This can be particularly relevant when working with external vendors to produce content you want to self-maintain, or have greater flexibility which external partners you want to use to do maintenance.

Where different tools have been adopted in different parts of the business, a move to standardisation can be a contentious issue. In these circumstances there are practical considerations such as the maintenance of existing content and the extent of the available skills that may drive a decision to standardise on one two, or a number of different tools. One option where there are multiple tools in place is to mandate the output standards to ensure that the learner's experience of the content is the same irrespective of the tool used to author it. This can be achieved by creating design templates that ensure that the layout and design remain the same irrespective of the authoring tool.

Sharing of completed content and the assets used for content production, are also benefits of tool standardisation. Content produced within one business unit, can also be reused elsewhere in its original form, with locale-specific content or after language translation. This can also be advantageous when the production is done externally; adopting a standard development tool makes it much easier to mix and match which vendors produce and maintain e-learning content. (The effect on the supplier relationship should not be ignored and we will consider this when we look at authoring strategies later in this series of papers).

Need to deliver to more channels

For most organisations, the initial drivers to adoption of authoring tools are often based entirely around the production of 'e' content, with little or no consideration of using the same tools to deliver to multiple channels. Commonly this is because the responsibility for e-learning sits with a niche group or function within the wider L&D department.

Alternatively, it could also be because there are simply no strategic considerations around cross channel content reuse and management. Currently, this is very common, and our research confirms that few organisations have a joined up view of their learning content production and delivery across all learning channels. At a time when businesses are seeking to extract the greatest possible value from their content, this seems like a remarkable oversight.

Even the simplest e-learning authoring tools provide the ability to export the content in multiple formats. From SCORM compatible content for use in an LMS, through to printable documents output in Word or PDF formats. Higher end tools such as a Learning Content Management Systems (LCMS) are designed explicitly to manage and reuse content assets in multiple formats, including e-learning, mobile delivery, performance support as well as face to face learning materials and workbooks.

The benefits of being able to deliver content to multiple delivery channels can be significant, both reducing overall learning content production costs and speeding up your ability to leverage content into new channels.

Insights...

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Because You Can – Lowering the Barriers

Any organisation looking at the options for e-learning authoring are presented with more and greater opportunities than at any time in the past. Whether looking to adopt e-learning for the first time, or to get better value from an established e-learning investment, choices are on offer that five years ago would have been inconceivable.

Without doubt, the increased availability of more sophisticated non-specialist tools has played a part in the move away from external production using proprietary tools, with a wider range now than ever before. Improving technology and an increasingly competitive marketplace ensures that, with some careful consideration, most organisations should be able to find an authoring tool that meets their requirements at a lower cost than was previously possible.

Lower Cost of Entry

There is clearly a much lower financial barrier to entry, with the price for some tools starting at a flat cost of less than a £500 per licence. At that price point, the tool will not be the most sophisticated or highly featured, but it will enable users with limited skills to output e-learning content in various formats, including SCORM compatible packages for use with an LMS.

That isn't to say that this level of expenditure would be enough to purchase a solution suitable for all organisations. Factors such as multiple authors quickly increase the licensing costs to the point where a multi-user tool may be more cost effective. If those authors are located across multiple locations, issues such as the sharing of assets and collaborative working need to be addressed if the maximum value is to be derived from the selected tool.

Where there is undoubtedly a potential saving is the removal of the requirement for technical specialists to use these tools. Despite what the marketing may suggest, there is a need for users to have some degree of skill to use these tools, but it is very different to complex specialist tools such as Authorware, which historically required a company to employ specialist programmers on significant salaries.

Lower Skill Requirement

This "ease of use" is potentially one of the most appealing traits of these non-specialist tools. Indeed, many of the mid-market tools have undergone redevelopment, or at least repositioning, to aim for the non-specialist market.

In-house production becomes a much more realistic option when an e-learning authoring tool can be viewed as a commoditised resource in the same way as office applications such as Word or PowerPoint. It simply becomes another tool that can be used when required, and ignored when not. This removes the pressure and inherent risks associated with a specialist tool that requires specialist resources, ensuring that both the tool and its user are being utilised to maximum effect.

Whilst good in theory, in practice the ability to use these tools with little or no specialist skill is not quite so clear cut. Our research shows that the reality is more complex. All the organisations we spoke with shared one view: no matter how good the tool is, it needs the right person using it. Someone lacking the necessary skills will not be able to use the tool to produce *worthwhile* learning content, any more than possession of a copy of Microsoft Word would make them the next bestselling novelist!

When good enough is good enough

Having authors with lower technical skills using simpler tools to delivery standardised e-learning content is also possible in part because of changing views about what constitutes “good e-learning”. The increasing desire to scale the amount of e-learning used in the business, and to do it much quicker, has altered the perception of what is considered “good enough” or “fit for purpose”.

Many e-learning teams have historically preferred to focus on complex highly designer content solutions that require lots of skill, time and budget to produce. Whilst this approach will always be appropriate for selected projects, it isn't justifiable for the majority, which need good enough effective learning content produced in an economically viable cost and timescale. In these cases, there is has to be an acceptance that ‘good enough’ is ‘good enough’. Producing content that is ‘good enough’ for the job in hand is becoming more common, and is a key change if e-learning is to become a regular high volume element of training organisations provide.

SME Production

One of the more difficult questions to answer when using authoring tools in-house is whether Subject Matter Experts (SME's) should be e-learning authors. There is often an assumption that these tools can simply be given to an experienced SME, and they will be able to produce usable content. In reality, by virtue of their expertise, SME's are usually under considerable demand in their normal ‘day job’ role. The production of training content is something that may be difficult to balance with those demands.

It is also more likely that content produced by SME's will be quite simple, usually Word or PowerPoint based material that is converted for use as self paced learning or delivery by an expert. It may be possible for SME's to convert this content themselves, or it may be more appropriate to give the content to someone more experienced with the authoring tool to do the conversion. We will discuss SME Production in more detail in the paper looking at content authoring strategies.

Insights...

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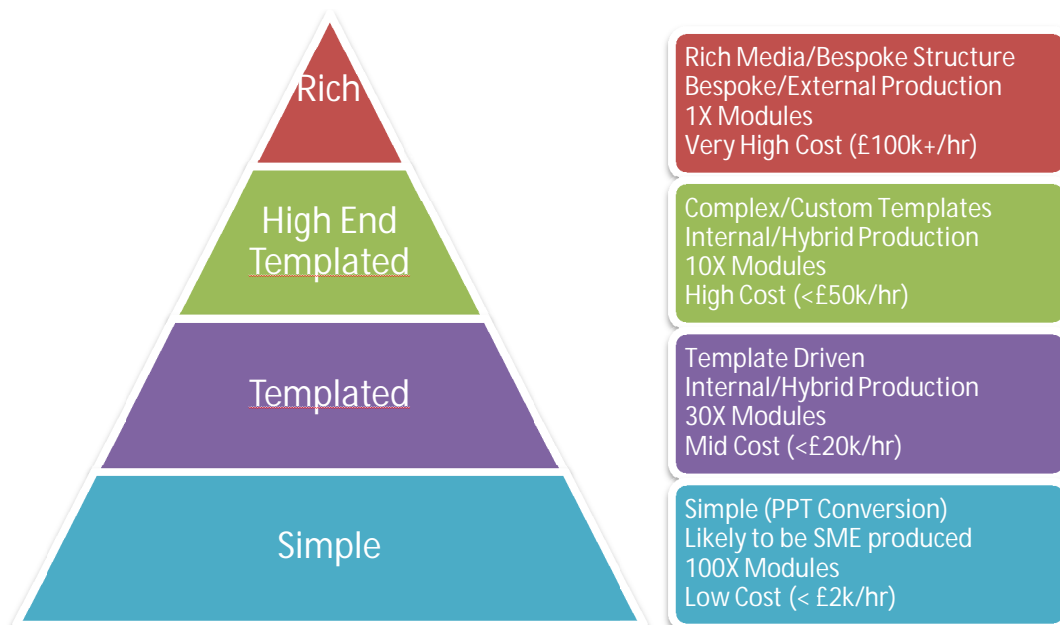
ADDITIONAL BENEFITS

As well as the main economic, risk and entry-barrier drivers, that are a number of additional benefits associated with changing e-learning production model and tools.

Increasing the Reach of E-learning

The increasing availability of simpler tools allowing relatively unskilled developers to produce e-learning content without a cost premium enables it to be applied to a much wider range of solutions than before.

It also allows the creation of a layer of content that didn't previously exist as formal learning material. Subject matter that couldn't economically be developed as traditional e-learning content or economically delivered as face-to-face training can now be easily created and deployed. This new layer of content may be produced by the L&D department, or by the business units with little or no L&D involvement. Either way, the economics and usability of these new tools allow more options, whether internal or externally supported.



In the model above, the Rich area refers to those few projects where the development is entirely bespoke with no use of templated content, and is usually reserved for modules with a high level of technical complexity and complex instructional design such as business simulations. The costs are such that they would normally only be justified for high profile business projects or where considerable business benefit can be demonstrated.

The High End Templated area is the one usually targeted for traditionally produced e-learning. It is suited to this approach because the content is normally of high value to the organisation and easily justifies the expense of this production method. It is templated in as much as the vendor will have a set of base templates from which they will work, therefore reducing the cost of production. There is still the requirement for solid instructional design input. This can only reasonably be done for a small number of modules for many reasons, such as cost and maintenance.

The Templated area is populated by content that is simpler, although likely to have some degree of media richness, and may have been "produced" internally or externally. This kind of 'second tier' content is common

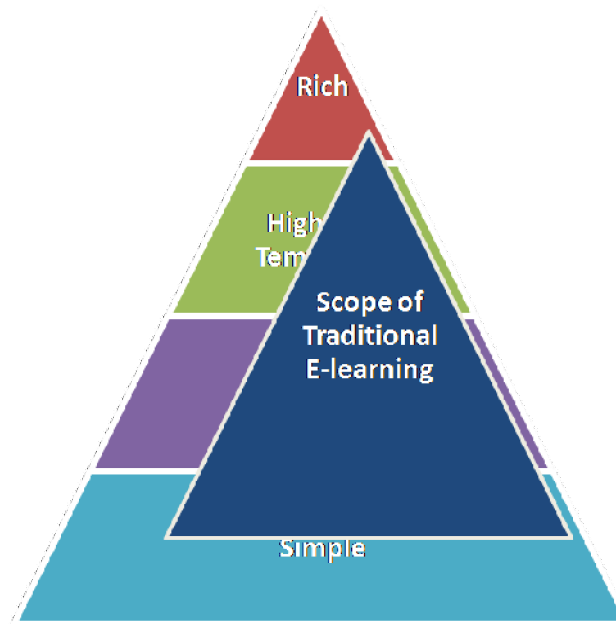
in more mature e-learning adopters. It is usually templated rather than bespoke, and will have a lower overall cost. There is some degree of instructional design, but this is often limited to that which is inherent in the templates used.

The greatest untapped opportunity by volume lies in the Simple area, where most of the learning activity currently sits outside of the L&D function. Its specialist nature and small audience size would make it uneconomical to deliver as a *formal* face to face intervention or using traditional e-learning authoring methods. It is an ideal candidate for internal authoring using non-specialist tools. There will be little or no formal instructional design input.

Please note: Estimated cost ranges are shown as a cost per content hour to provide comparison with traditional e-learning development. This does not mean we expect the content to be an hour long! In fact, the trend for simple and templated content is for more much shorter content durations – typically 10 to 30 minutes with some organisations going lower than that.

It is clear that any content, irrespective of the category into which it falls, should be fit for purpose. A piece of content may still have high value to its audience, even if the content could be considered to have low production values.

As we can see in the diagram below, traditional approaches to development offered a much more limited range of options; from simple templated through to high end templated. In effect the high end templated content was viewed as the highest standards that most organisations could offer. The sophisticated content was so expensive that it was only used in extreme cases where the cost could be justified, such as the military where the risk to life and the cost of physical equipment were both high.



Similarly, whilst traditional e-learning development may have been relatively costly, some of the deliverables from this investment was little more than automated PowerPoint slides with a few simple interactions; the kind of content that could now be developed by users themselves using the latest simple authoring tools.

Either way, the new tools and e-learning production options clearly give organisations the ability to provide e-learning solutions for a greater range of needs, and at a greater range of price points.

Greater Scalability

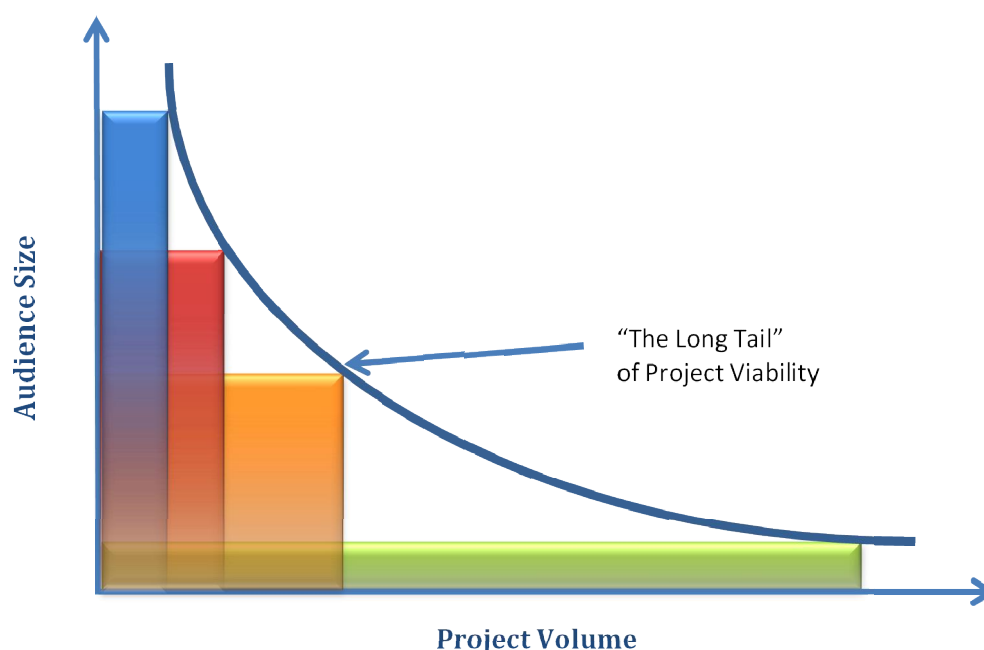
Earlier in this paper we listed scalability as one of the key frustrations of traditional development models, both in-sourced and outsourced. L&D Functions have long faced the problem of having to say No to the business, because it was unable to produce e-learning quickly enough or deliver face to face economically enough. The shift in the authoring tools landscape clearly gives them the potential to say “Yes” more often.

Our research shows that the demand for e-learning in most organisations has grown rapidly, and the new options are helping to accelerate that growth. Because of the low marginal cost of delivery, e-learning has always been cost effective to deliver to a large scale audience. The problem historically has been that the cost of e-learning development has been relatively high, limiting the number of projects that could be delivered and therefore the scope of where e-learning could be applied.

Now the new production methods and tools have changed the economics of e-learning development, there is a significant opportunity to rapidly scale the number of e-learning solutions that can be developed on a custom basis. The ability to do this for smaller audiences, also massively increases the potential number of topics or contexts in which e-learning can be cost effectively used.

The increase in scope and potential can be illustrated using the following diagram showing the “long tail” of project viability, first referenced by Elearnity in our papers on Rapid e-learning. As the viability for smaller projects increases, so does the number of potential projects exponentially.

Impact of new e-learning Tools and Management Approaches on Project Viability



A vast increase in the number of e-learning courses being produced will also create its own problems, not least how to manage the scale of the production process and the quality of what is being produced. It also magnifies questions of longer-term content management, reuse and maintenance, and therefore causes challenges for the tools being selected, as well as the processes and resources of the organisation to support them. This aspect will be discussed in more detail in a follow-on paper.

THE AUTHORING TOOL SPECTRUM

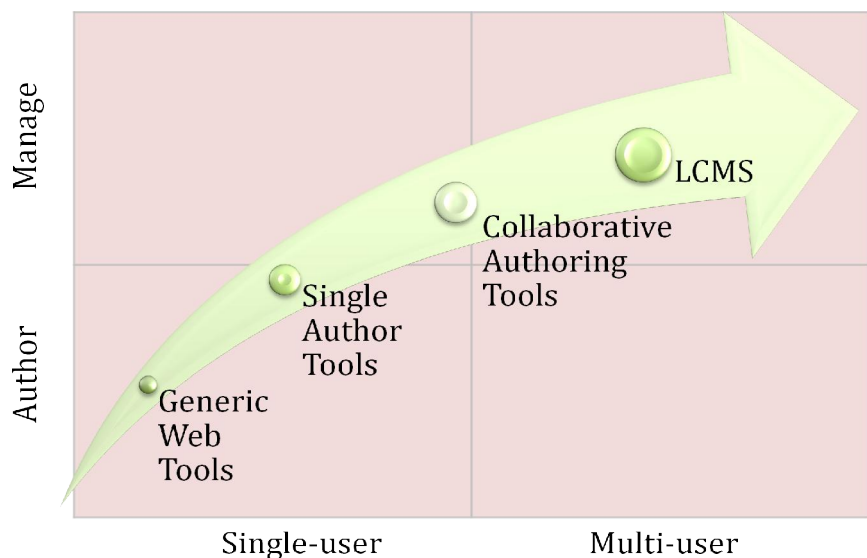
It is not the purpose of this paper to explore the specific authoring tools and their implications in any significant detail; that will be done in a subsequent paper - E-learning Authoring: Tools and Technologies. However, given the inherent impact of the new tools on both the chosen corporate strategies, and the “because you can” drivers, it is relevant to provide some introduction to the tools we are discussing.

By e-learning authoring tools, we are referring to any tool that is either designed for e-learning authoring, or is commonly used for that purpose. Whilst there is a large range of tools used to create e-learning, they broadly fall into four main categories.

- Generic Web Tools
- Single Author Tools
- Collaborative Authoring Tools
- Learning Content Management Systems

Whilst crude, this segmentation usefully categorises the main focus and capabilities of the tools, especially between whether they are aimed at individuals or multi-developer teams, and the level of content management functionality they provide over and above authoring functionality. This is summarised in the following diagram.

E-learning Authoring Tools



Generic Web Tools

This group includes common web design tools such as Dreamweaver and Flash, both from Adobe. Where the desired output is for web based content with no tracking through an LMS, any web design tool could potentially be used. However, some suppliers such as Adobe have recognised the potential for these tools to be used for producing e-learning and supply extensions that allow LMS compatible output as well as bundling together suites of tools focussed on the e-learning market.

Whilst historically it was quite common to find generic web tools used to produce to e-learning (especially in external e-learning producers that could tailor them or build specific extensions to support e-learning

standards, it is less common now to find them used as internal e-learning tools, unless the organisation already has an investment in the licences for the tools and people skilled in using them. These are also typically single author tools, used by individual developers.

Single Author Tools

These tools are installed on a client PC and are designed for use by one author. Organisations may have multiple licences to use the tool, but each is a standalone instance and there is no built in collaboration features.

They are designed specifically for authoring e-learning, and are commonly aimed at a non-technical audience.

Typical examples are Articulate Presenter, Lectora from Trivantis and SumTotal's Toolbook, although there are many competing tools available. They range in complexity from simple tools that do little more than convert PowerPoint presentations into Flash, to full blown authoring environments that enable the building of complex interactions.

Commonly they can output the content in multiple formats, usually as SCORM and AICC compliant for use with an LMS as well as formatted for the web, mobile devices or as printable documents.

Collaborative Authoring Tools

These tools are partially or completely server based, and by holding the content in one location, can allow multiple authors to work together on a project. Typical examples would be Atlantic Link and Mohive.

Workflow management features are usually present, which allows SME's to review the content and add their comments on screen.

Although not as sophisticated as the repositories offered by an LCMS, the collaborative tool's approach of coordinating content development via a central server, allows content to be made available across distributed teams and separate business units. This allows the reuse of the content and the assets in multiple settings, and can reduce or remove the duplication of effort across business units.

This approach can also be beneficial where the content is to be delivered in multiple languages.

Learning Content Management Systems

A Learning Content Management System (LCMS) is designed for both authoring and managing content. An LCMS will also provide extensive capabilities for management of the development and approval workflows and processes, and is designed to support content production and sharing on a larger scale.

Whereas collaborative tools are based around courses, an LCMS allows the management of the individual learning objects and component assets that make up a course. A learning object can be created for one course, but reused in many others. In theory a learning object has no limitations as to how large or small it can be, but there are practical limitations at either end of the scale.

Whilst most e-learning authoring tools are specifically designed to do just that, author only e-learning, an LCMS will frequently provide functionality for output content in multiple formats, potentially include for printed workbooks, instructor materials, mobile content and so on.

Discussing Tools in More Detail

In reality, each of the main types of tool described previously is itself fairly broad, and some tools will be on the boundary between categories, or positioned differently by the vendor in different markets.

In the paper E-learning Authoring: Tools and Technologies we provide analysis of each type of tool in greater detail, as well as looking at other important considerations. Supporting tools, media assets and content templates are all dealt with in detail.

We will also look at the implications of selecting tools and how they relate to the main authoring strategies. This is of critical importance, as typically our research shows that tool selection often pre-dates a clear commitment of authoring strategy – potentially a recipe for failure.

Most large organisations have experimented at some stage with internal authoring, and many have made tactical investments in tools to support that effort. This can be a good way of responding to specific pressures, or an innovation to diversify from the externally produced content model that has been dominant in the past.

But, on their own, tools will not lead to a sustainable strategy for producing e-learning. The more strategically an organisation considers its content authoring process, the more likely it is to identify requirements for managing, maintaining and reusing content, as well as authoring it in the first place. This kind of thought process often leads to greater consideration of collaborative authoring tools and LCMS.

Insights...

“The more strategically an organisation considers its content authoring process, the more likely it is to identify requirements for managing, maintaining and reusing content, as well as authoring it in the first place.”



E-LEARNING AUTHORING STRATEGIES

Strategic Scenarios

With these new tools and new models of development, comes a range of new options for the production of e-learning content. We call these e-learning authoring strategies, and currently our research has identified seven broad scenarios,

Scenario	Description
SME Production	Production of content by SME's in the workplace. May be done using non learning specific tools such as Word and PowerPoint or non-specialist e-learning authoring tools.
Local Rapid	Small-scale local content development using small team trained to use a rapid or collaborative tool. May potentially be multiple small teams across the organisation. Most likely to be part of the L&D Function but may sit within the business where volume demands it.
Distributed Content Process	Development is distributed across locations and/or functions, but the development team remains an internal resource. The tools used will be specifically designed for collaborative development and the sharing of assets and content.
Content Factory	Large scale internal production based around automated process and systems. The team will be internal and the size of it will allow for some specialist roles. The tools used will very likely have the ability to share assets and may allow for collaborative authoring.
Partially Outsourced	External vendors are engaged to support specific roles in the development process (perhaps on a per project basis), but not to manage the whole project. The organisation will mandate the choice of development tool to ensure no lock-in to a particular supplier.
Rapid Partner	Preparation of content and work with SME's is carried out internally, but the development of the e-learning itself is outsourced to one or more external partners. Allows for rapid development model on a large scale using an external partner to accelerate capability
Fully-outsourced (Traditional external)	Use of an external vendor who provides the whole development capability, from project initiation to delivery. Internal involvement is usually limited to SME and L&D stakeholder.

These scenarios have evolved as a response to the different drivers we discussed earlier, both to meet the changing demands of the business, and because of the new possibilities opened up the new types of e-learning authoring tools.

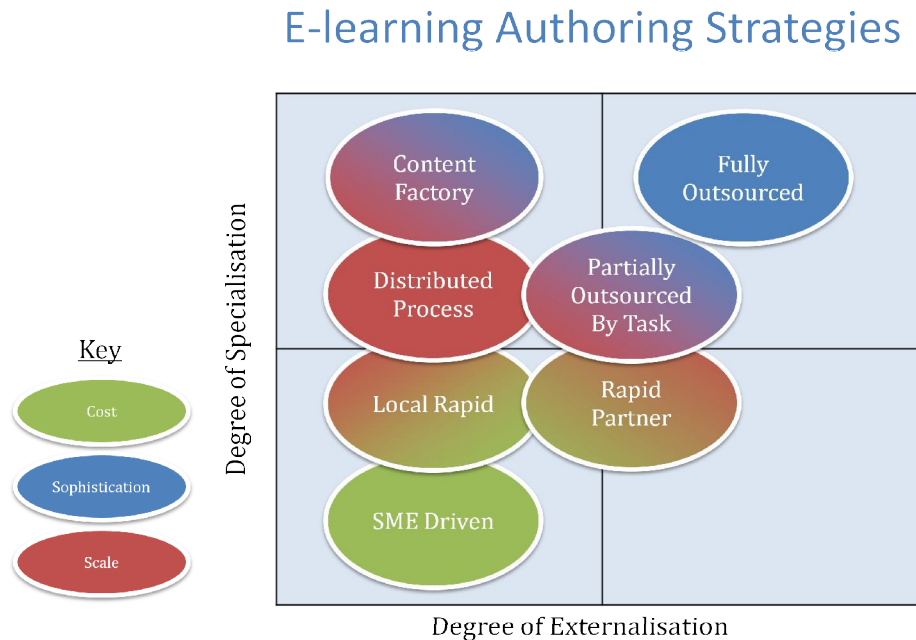
Specialism and Externalisation

Organisations may also have a cultural preference for some of the models over others, for example between fully outsourcing and an internal content factory. In essence, the different authoring strategies vary in both their:

- Degree of externalisation - how much external partners are used, and the roles they fulfil, and

- Degree of specialisation – how specialised are the resources used to develop e-learning

This can be summarised in the following diagram:



SME Driven is the least specialised (by definition you are using non-e-learning resources to lead the content development process. It also of course mainly uses internal resources.

Local Rapid is a common approach adopted by organisations trying to leverage the new tools to speed up and reduce the cost of content production. Again, the resource is internal, but the L&D or e-learning team is trained to use tools to accelerate delivery and, hopefully, to ensure better instructional design and outcomes.

In a large company with fragmented L&D in multiple business units or geographies, Distributed Process scales beyond local rapid to connect multiple local teams into a connected development web, enabling sharing of content and resources.

Content Factory describes the centralisation of the development process into a dedicated central team with its own authoring, design and technical resources. This is similar to the “internal development team” found in some companies historically. Within the team, there will be a significant investment in specialised skills and resources to cover the scope of the e-learning production cycle.

All of the above are internally-driven strategies using primarily internal resources.

Rapid Partner is an extension of the Local Rapid model, where a hybrid production approach is used with an external partner providing greater scalability of resource (and therefore projects), but still largely based around a rapid e-learning model with a small team doing all the tasks.

Partially Outsourced is a more segmented process driven approach where key parts of the production cycle are outsourced to an external partner. The segmentation by task inherently leads to greater specialisation in the roles played by internal and external resources. Multiple external partners may also be used, e.g. one for providing templates, and another for finalising the content and testing the end modules.

Fully Outsourced takes us back to the external production models of the past. But even here we see changes, as the availability of new tools has led to greater interest in the standardisation of the tools used to produce e-learning, allowing for example for internal maintenance of the content post-production.

Impact on Process, Resources and Tools

The impact of these scenarios on process, tools and resources can be summarised in the following table:

Scenario	Resources	Tools	Process
User-generated Content (SME Production)	<ul style="list-style-type: none"> Primary – Internal (Business) Self-managed Enabled by internal team 	<ul style="list-style-type: none"> Individual or collaborative tools (user friendly) Templated devt 	<ul style="list-style-type: none"> User-driven Template/tool facilitates devt process Supporting QA/upload
Local Rapid	<ul style="list-style-type: none"> Primary – Internal – 1 to 5 (L&D) Contractors for specialist tasks/supporting assets 	<ul style="list-style-type: none"> Individual or collaborative tools Templated development 	<ul style="list-style-type: none"> Collapsed process 1 person does everything Working with SME Disconnected if multi-team
Distributed Content Process	<ul style="list-style-type: none"> Primary – Internal, distributed Contractors for specialist tasks Some central facilitation 	<ul style="list-style-type: none"> LCMS or collaborative tools supplemented with management systems and shared repositories 	<ul style="list-style-type: none"> Structured Automated workflow Some central facilitation
Content Factory	<ul style="list-style-type: none"> Primary – internal 10-50 Internal capability for specialist tasks/supporting roles 	<ul style="list-style-type: none"> LCMS or collaborative tools supplemented with management systems and shared repositories 	<ul style="list-style-type: none"> Highly structured Highly automated Multiple person team Specialist roles in process
Partially Outsourced by task	<ul style="list-style-type: none"> Mix of Internal and External based on requirements 	<ul style="list-style-type: none"> Mandated by corporate Could be individual, collaborative or LCMS Shared (based on task division) 	<ul style="list-style-type: none"> Structured Specialist roles
Rapid Partner	<ul style="list-style-type: none"> Primary – external Internally facilitated Includes specialist skills Scale depends on partner 	<ul style="list-style-type: none"> Individual or collaborative tools Templated (partner) devt 	<ul style="list-style-type: none"> Segmented collapsed Internally facilitated Joint team 1 person (partner) led
Fully-outsourced (Traditional external)	<ul style="list-style-type: none"> Primary – External Internally managed One stop shop Scale depends on partner 	<ul style="list-style-type: none"> Chosen by vendor, or mandated by corporate Supporting Devt tools chosen by vendor 	<ul style="list-style-type: none"> Largely black-boxed Multiple person team Specialist roles in process

In the paper E-learning Authoring: Strategies and Development Models we will provide analysis of each of the main authoring strategies in greater detail, as well as discussing the realities and their longer-term implications.

NEXT STEPS

Summary

We have seen that there has been a seismic shift in the e-learning authoring landscape, with a steady move away from traditional outsourced and in-sourced models. The tools and technologies have evolved to a stage where it is possible for people without technical skills to produce fit for purpose e-learning content.

The economic downturn has increased the focus on the need to produce more for less, and to do so more quickly. At the same time there is an increasing realisation that these tools not only provide a potentially cheaper way to do what has been done before, but they also open up the possibility of producing content for subjects where it was not previously economically viable to do so.

New tools have brought new options, and now is the time for all organizations to consider their approach to content authoring.

Key Elements to Success

With a rapidly changing landscape and quickly evolving tools, it would be very easy to rush straight into the decision to purchase an authoring tool. Enthusiasm and a tool may get you started, but a successful implementation needs more thought, and there are some key elements to success that we have identified.

Strategies and Development Models

A content authoring strategy, clearly aligned with the goals of the business is fundamental to ensuring that all aspects of implementation are considered and managed. How much content will need to be produced? Do we have the capacity? What is the funding model? These are serious questions that need due consideration early on in any decision about content authoring. Only then can longer term issues such as the sustainability of the content and the development model be considered.

Establishing a clear process to manage content production will assist in smooth development. The nature of the organisation and the available and planned resources will have considerable impact on this, and it needs early consideration as it will be a key factor in choosing the right tool.

There are fundamental decisions to be made about the balance between internal and external resources (if any are required).

In the next paper in this series, *E-learning Authoring: Strategies and Development Models*, we set out to answer these questions, and provide guidance on establishing an e-learning authoring strategy.

Tools and Technologies

Once the strategic questions have been answered, the process of selecting an authoring tool can move to the technical and practical considerations. The fit with strategic and resource choices such as workflow and language support, as well as technical issues such as output format are critical decisions requiring considerable thought.

In the paper, *E-learning Authoring: Tools and Technologies* we will provide Elearnity's analysis of the currently available tools.

Accelerate and De-risk

To talk to us about our research on the Content Authoring landscape, or to discuss what it might specifically mean for your organisation please contact us at info@elearnity.com or by phone at +44 (0)20 7917 1870.

We will use our independent expertise to provide you with the guidance you need to accelerate and de-risk your decisions. We have a wealth of experience, tools, research and profiles at our disposal. We don't have any "products" to sell and we have no "vested "interest" to bias your outcomes. We concentrate on pragmatic, independent advice.

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