

E-Learning: Controlling Costs and Increasing Value

Kieran Walsh

ABSTRACT

E-learning now accounts for a substantial proportion of medical education provision. This progress has required significant investment and this investment has in turn come under increasing scrutiny so that the costs of e-learning may be controlled and its returns maximised. There are multiple methods by which the costs of e-learning can be controlled and its returns maximised. This short paper reviews some of those methods that are likely to be most effective and that are likely to save costs without compromising quality. Methods might include accessing free or low-cost resources from elsewhere; create short learning resources that will work on multiple devices; using open source platforms to host content; using in-house faculty to create content; sharing resources between institutions; and promoting resources to ensure high usage. Whatever methods are used to control costs or increase value, it is most important to evaluate the impact of these methods.

Key Words: *Medical education. Cost. E-learning. Value.*

E-learning now accounts for a substantial proportion of medical education provision at undergraduate, post-graduate and continuing professional development levels.^{1,2} This has happened remarkably quickly over the past 20 years.³ E-learning undoubtedly had a significant impact in that time period and has been shown to have had a positive effect on healthcare professionals' knowledge, skills and behaviours. This progress has required significant investment and this investment has in turn come under increasing scrutiny in the past 5 years.⁴ There is increasing realisation that e-learning like any other product or service must be able to demonstrate its value for a given cost.^{5,6} So how as a result should institutions and tutors ensure that the costs of e-learning are controlled and its returns maximised?

The good news is that there are multiple methods by which the costs of e-learning can be controlled and its returns maximised. In this short paper, some of those methods are reviewed that are likely to be most effective and that are likely to save costs without compromising quality. The emphasis is on controlling costs from the perspective of the institution. The perspective of the individual learner or consumer might be different - however, their particular viewpoints are beyond the scope of this manuscript.⁷

The first and the most effective way to control costs in e-learning is to approach the problem from the perspective of the content. And the first question to be asked is - does content have to be created at all, or could it be licensed in from another source, or is there any free

content available? Content creation from scratch is expensive; buying from a commercial source may be less expensive; and accessing free content is best of all. Accessing free content may require a culture shift amongst faculty - there is often a feeling that free resources must by nature be not very good. Often there is also a culture of "not created here" - whereby faculty will only value content that they have created themselves. However, this makes little educational or commercial sense when it comes to e-learning - there is much high quality and low cost or free content available - if institutions will only be willing to look for it and try it.

If, however, there is no choice but to create new content, then there are still many opportunities for cost control. First of all, think about making short and discrete learning resources. These will take less time to create and will be more likely to be used (learners tend not to spend hours online working through individual pieces of content). Short and discrete resources (for example podcasts) will thus save costs and increase impact. If a learner wishes to have more substantial e-learning experience then they can package together a number of resources that will fulfil their learning needs.^{8,9}

It is also wise, when creating learning resources, to make them compatible with as many devices as possible. Device responsive design should enable the same resource to work on a desktop, a tablet or a mobile phone.^{10,11} Enabling text to speech technology might also allow the user to convert a text based resource into an audio resource.

In terms of platforms, there is now little point in building from scratch as a number of commercially available and open source platforms are available and can be customised to specific institutional needs. Most of these platforms are now robust and can enable many features of interest to e-learners - from tutor support to design

BMJ Learning, BMA House, London, UK.

Correspondence: Dr. Kieran Walsh, Clinical Director, BMJ Learning, BMA House, Tavistock Square, London WC1H 9JR. E-mail: kmwalsh@bmjgroup.com

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tools to reporting functionality. These advantages are countered by only a few disadvantages. The main disadvantage is that open source platforms might not meet every single one of the required needs.

And who should actually be the creators of e-learning resources? Here it is best to make use of the institute's own faculty. Most institutions have a wide range of expertise in many different specialties and it makes much sense to leverage the expertise that is already available in-house. Faculty are also more likely to promote their own content and faculty created content will ensure consistency between face-to-face and online content. Faculty will require training in how to create courses but if you use a small number of templates and thus make the content creation replicable then a lot less faculty development time will be required. This is because once a contributor has created one online resource they will be able to create any number of such resources.

It is also worth considering the extent to which an institution might be able to share resources. It might be able to share the actual resources or the platform on which they are hosted, or software tools, or anything else that the institution might use in content creation. These components may be shared between institutions, regions, or even countries.¹²

One way to control expenditure is to attempt to sell the resources to other institutions or individuals outside of your own institution. However, it is best to treat cautiously before proceeding down this route. It is difficult to encourage others to share the selling content - and so what might be gained in revenue might be lost in good will. But perhaps more importantly selling e-learning resources is not a straight forward task. To develop a sustainable income stream, a sales and marketing strategy will have to be put in place and resources will have to be dedicated to sales and marketing. These resources will inevitably consume any income that one might receive.

One final way to increase value is to generate high usage.¹³ Therefore, a promotional campaign must be put in place at the outset. Higher usage simply means that the cost per e-learning resource accessed falls and sometimes falls dramatically. Hosting fees may rise slightly as a result of increased usage but these fees will

usually be modest in comparison to the increased value that comes from increased usage.

Lastly, whatever methods are used to control costs or increase value, it is most important to evaluate the impact of these methods.¹⁴ In this way institutional intelligence will develop that will enable institutions to learn from what works and what does not and share this intelligence with colleagues.

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