
Creating an MLE

Introduction: What is an MLE?

- Where are we now?
- Why have we done it this way?
- Original authors' biographies

Creating a Managed Learning Environment (MLE)

1. Introduction

1.1. What is an MLE?

The term Managed Learning Environment (MLE) is very new and it is still the case that we do not have a commonly agreed definition of what an MLE actually means. It first came into being in 1999, when the JISC organised two events in London and Manchester with MLE in their titles, and at this point the definition of the term began to be explored. Clearly it was concerned with technology, the learning process, with administration, and with management or organization. It also had to mean something different from the Virtual Learning Environment (VLE), as this term was beginning to be understood.

The very loose definition that began to emerge involved the following:

- MLEs were concerned with whole institutional systems
- MLEs involved the joining-up or interoperation of several separate systems – Student Record Systems, Library Systems, Management Information Systems, VLEs, timetabling systems and so on.

Those that felt they had a good understanding of the meaning of the term began to draw diagrams of what an MLE might look like. However, while this was useful for some, the diagramming approach only partially succeeded. First of all, diagrams, while appearing coherent, can conceal a multitude of sins. What does a box represent – a technical system, a process, a department, any of these? What does an arrow mean – data flow, or just some undefined relationship? These issues are explored in detail in a report to the JISC (Holyfield 2003). Secondly, diagrams can only provide a limited elaboration of a concept. To use an analogy, a block diagram of a television might be meaningful to engineers but it fails to explain to lay people what a television does and even less the implications of television for society.

Likewise, the definition suggested earlier, that an MLE is the joining-up of existing technical systems does not elaborate on the purpose of this action. What do we want from MLEs? How does joining up systems give this to us? Who benefits? How much will it cost? Is it worth it? We need to be clear about our purposes and only then should we address other difficult questions such as what systemic effects the MLE will have? How will people's experience of the institution change? What effect will it have on the work of teachers, administrators, managers, support staff and students? What impact will it have on departments and their interrelationships? These are deep and difficult questions, but if they are not fully explored, MLE development can be a risky business.

The resource we have provided here does not give the answers to these questions; instead it elaborates in some detail the questions that institutions need to tackle to be able to successfully specify, design, implement and benefit from an MLE. It also provides a huge resource base of other people's and institutions' experiences and advice, and tries to do so in a way that is accessible to all the people who need to be involved – managers, technical staff, teachers, support staff and so on.

1.2. Where are we now?

Whilst the concept of an MLE appears to offer solutions to a wide range of our problems, it is evident that there is still no clear model for either technical integration nor organisational change; this is new territory for everyone, and the complexity of the task and the implications for organisations are rarely fully recognized. However a number of lessons have been learned by

pioneering projects in the field, resulting in the problem domain becoming better defined.

The first phase of implementation projects funded by the JISC are complete, and they have produced a rich range of experiences and materials, which can be seen as the outcomes of a process of action research. A number of studies and reports were commissioned alongside the JISC funded projects themselves to observe the process and draw out the lessons being learned. Very often the most valuable lessons may be those where things did not go to plan but capturing these important insights may involve risks to those prepared to be open about this. It is therefore a tribute to these pioneers that they have often been so generous with their experience and reflections.

A key study was Jos Boys' review for the JISC of the Building MLEs in HE programme which identified and summarised lessons learned, identified generic themes and provided a number of recommendations including a proposal that a guide should be produced which would capture the rich experience of the programme for the benefit of the wider community. This guide follows up on one of her recommendations:

'MLE development inherently demands a level of cross-institution collaboration and commitment far beyond other ICT projects. It is thus essential that the HE/FE sector both has guidance on the implications of MLE development in terms of organisational, pedagogic and technical re-structuring, and that any future projects are more firmly embedded in their institutions from the start.'

(Boys 2002)

1.3. Why have we done it this way?

A key lesson is that there is no simple, off-the-peg solution to MLE development. Organisations differ in their styles and systems and in how they implement their missions. Technologies can have a significant effect on the way that the aims of an organisation are fulfilled, and to adopt the same technologies may lead to homogenization and loss of differentiation. This implies that the design of integrated systems is likely to vary between organisations, even though the component systems may be the same.

This infoKit has been designed to offer a route through the lifecycle of creating an MLE. We recognise that this is an ongoing and iterative process so it is also designed to enable you to dip in to any section you wish. The approach taken does not suggest that there is 'the right and only' way to create your MLE, but offers advice, options and tools for you to use in your context.

Effort has been made to make this guide relevant to managers, teachers and IT staff and to bridge the worlds of organisation, pedagogy and technology, thereby assisting the development of MLEs to be the result of an integrated approach. It also aims to be inclusive and to respond to the needs of organisations ranging from small to large FE colleges, new or traditional HEIs, and clearly this is an ambitious aim. We discuss at the end of this introduction how you can play a role in ensuring we meet some of these aims.

The section editors have all been involved in MLE development of some description over a significant period of time and this range of experience is reflected in the approach they have taken to their sections. Each section offers an overview of the topic, and we hope that you will find it useful to look at all of these, even if you have a specific concern with only one of them. The subsections provide greater depth of discussion, and the associated key resources have been selected to provide a range of supporting tools and information, ranging from case studies from the JISC funded MLE projects, to suggestions and advice on how you might approach certain problems, online resources and further reading.

In the first section, Stuart Lee suggests that institutions need to decide whether they need an MLE at all and, if they do, exactly why they are prepared to invest the effort in developing one. If this question is not discussed at all levels of the institution then MLE development may well be disappointing for many people.

Once the high level reasons for going down the MLE route have been established it is necessary to build a deep understanding of how the organization carries out its business at present. Educational institutions are complex organisations whose structure and processes have evolved over some time. In the second section, Grainne Conole examines how one might set about developing a shared understanding across the organization and its processes in order to be able to begin the process of identifying the precise requirements for the MLE, which is the subject for Tony Toole's section. Methodologies for gathering requirements abound in the software industry but it remains a challenge for any project of this scale.

These three sections provide a solid foundation on which to begin to build the MLE. However, it is also important to know what technological options are available and the implications of your choice. Tom Franklin provides a comprehensive review supported by links to the experience of pioneering MLE development projects funded by the JISC. This is then followed by sections on design by Greg Newton–Ingham and Scott Wilson, and implementation by Ian Bloor. These provide advice on approaches to moving from the gathered requirements to building detailed models of the proposed MLE, and then to implement the project successfully, taking into account technical, organisational and social aspects.

Finally there is a section on embedding, which as the editor, Mark Stiles, says should probably be titled 'Planning for Embedding', as research to date has not indicated that MLEs are embedded in any UK institution in the sense described below. Nevertheless he provides sound recommendations on what the impact of an MLE is likely to be and the organizational and process changes needed if the MLE is to make a real difference to how things work.

Each section has several subsections each with 'key resources': guidelines, checklists, reports and case studies to support the main text. Space is provided for more resources to be added and we expect this resource base to be updated and grow, which is where you the reader can help, as we will discuss in the next section on developing a community of practice.

The infoKit assumes that any MLE development will be undertaken as a formal project and we will point you to other infoKits, such as those on Project Management and System Selection, where appropriate.

We hope that this infoKit will help the rapidly increasing number of you who are thinking about, or beginning to develop, a Managed Learning Environment of some sort. What is clear is that there is a huge amount of expertise 'out there', but many of you are extremely busy and have little time to publish or share what you are doing. It is also the case that many of us have questions, both from the small to large scale, which the rest of us could help with. If you have anything you would like to contribute, from very small anecdotes through to case studies or tools, we would love you to share these.

This guide aims to provide a start on building a rich and dynamic source of information and advice, but also to provide a mechanism for sharing experience and expertise. The structure provides a basis, and hopefully this will also evolve over time.

We do not claim to have provided a definitive model for creating MLEs; all of those involved in the infoKit have had to learn as they went along in these uncharted waters, and many of you will have equally useful contributions to make in what we hope will become a collaborative and mutually beneficial endeavour –we hope you find it a useful beginning!

Sarah Holyfield and Oleg Liber, editors

Section Editor

Sarah Holyfield is the senior eLearning officer for the University of Wales Bangor, responsible for the development of the university's eLearning strategy, and for supporting its implementation. As head of the CAL Unit since 1994 (since reorganised), she has had a cross institutional role in identifying important eLearning developments and how they might be implemented. This has involved her in a diverse range of activities, including managing one of nine national Teaching and Learning Technology Support Network (TLTSN) Centres; establishing a faculty CAL support initiative; developing an eLearning platform for the Community University of North Wales, involving 2 HEIs and 8 FE colleges; providing staff development in eLearning; and teaching on a new degree in eLearning delivered through eLearning, the development of which she contributed to and for which she was also the academic coordinator. She managed the university's working group on Learning Management Tools, which identified how the university might move forward with implementing a VLE.

She is the author of a JISC commissioned report concerned with developing a shared understanding of MLEs and the role of diagramming.

She was previously a senior lecturer in Humanities Computing at the University of North London, and has also taught in FE and schools.

Section Editor

Oleg Liber is Professor of eLearning at Bolton Institute of Higher Education and a founding director of CETIS. He is also the project manager for the RELOAD project, developing tools for developing standards compliant materials and learning activities. Until August 2002 he was director of the Centre for Learning Technology at Bangor University, where he managed a number of eLearning projects, including CoManTLE, which explored organizational issues in MLE development. Earlier he managed the design and development of Colloquia, the peer-to-peer VLE, and used the system to deliver a completely online degree, a BA in the Internet, Learning and Organizations. With Sandy Britain he wrote the JISC report "A Framework for the Pedagogical Evaluation of VLEs", of which an updated version is planned for early 2004.

Oleg has worked in education for thirty years, in schools, post-16 and higher education institutions. He has always been an innovator, and has been involved in leading edge learning technology development for twenty years. His main interests are in management cybernetics, radical constructivism and their application to new learning environments.

1.4. Original Authors' Biographies

The infoKit is the result of a project commissioned by the Joint Information Systems Committee (JISC) as part of its MLE programme.

It was managed by Tish Roberts, the JISC Building MLEs in HE Programme Manager, and arose from a proposal made in a report written by Jos Boys which reviewed the experience of this programme.

The project was located at the University of Bolton and overseen by Oleg Liber. The commissioning editor was Sarah Holyfield, who was responsible for managing the overall development and final

editing of the infoKit.

Each section was the responsibility of a single editor, who wrote most of text and identified the key resources. The editors were:

- Why might you want an MLE? [Stuart Lee](#), University of Oxford.
- Understanding your Organisation, [Grainne Conole](#), University of Southampton.
- Gathering Requirements, [Tony Toole](#), Coleg Sir Gar.
- Technology Options, [Tom Franklin](#), Franklin Consulting.
- Designing your MLE, [Greg Newton–Ingham](#), University of East Anglia and [Scott Wilson](#), University of Wales, Bangor.
- Implementation, [Jan Bloor](#), De Montfort University.
- Embedding, [Mark Stiles](#), Staffordshire University.

The project would also like to acknowledge the contribution of other members of the advisory group:

Tish Roberts, JISC MLE Programme Manager

Sarah Porter, JISC MLE Programme Director

Paul Ricketts, Vice Principal, City College Manchester

and

Bernard Paton, Gill Ferrell and Jacquie Kelly of JISC infoNet.

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