applied infoKit

JISC infoNet

www.jiscinfonet.ac.uk

Creating an MLE

Understanding your organisation

- What do we mean by organisational issues?
- External drivers
- Institutional context
- Finding out what really happens
- Defining your organisational profile
- Mapping initiatives, agendas & issues
- Types of organisation
- Organisations: Lessons learnt
- Identifying issues
- Finding and using information
- Linking the project into other institutional activities
- Lifecycles
- Lessons learnt: Alignment and institutional buy−in
- Staff development, training and support
- Staff development plans
- Staff development: Lessons learnt
- Planning, dissemination and evaluation
- Mechanisms for dissemination
- Developing your dissemination plan
- Developing an evaluation plan
- Models and frameworks
- Lessons learnt: Concepts of MLE development and eLearning

3. Understanding your organisation

This section will help you work through the organisational context within which your MLE developments will occur and to identify potential barriers and enablers. This also links to the section 'What are the key questions' in 'Why might you want an MLE?' and the section 'Implementing change' in 'Embedding'. Many of the key resources in this Section provide useful exercises and checklists and we would urge you to take the time to look through these.

Who should read this:

staff engaged in developing and implementing an MLE, in particular members of the steering group for the project and the project manager.

Outcomes:

At the end of this section you should have a clearer idea of what constitutes organisational issues and why it is important to take them into account when developing an MLE.

Approach:

The section provides you with appropriate guidelines and resources and guides you through the process with a series of questions to consider.

Overview

This section highlights why it is important to understand and take into account your organisational context when embarking on an MLE development and implementation. It considers:

- what is meant by organisational context
- what are the key issues
- what are the different kinds of organisational issues and what is their impact
- why organisational issues are important in the context of MLE development
- what strategies you need to have to understand and deal with organisational issues.

It outlines the stages and processes which need to be considered and the kinds of questions you need to address. It is based on a distillation of the lessons learnt from a variety of MLE development projects across FE and HE over the past three years. The information draws on the experiences of the projects involved in MLE developments under the JISC Building MLEs in HE and related programmes, but also includes pointers to other JISC projects and studies and other sites and programmes (such as the TLTP (Teaching and Learning Technology Programme), the LTSN web sites), professional bodies (such as Becta, SEDA and ALT) and relevant theory and research literature.

The sub−sections will help you to consider how to articulate what your organisational context is and how to identify specific organisational issues of relevance to your MLE development. Having identified and prioritised these we then go on to consider how to take them into account in the most effective way and offer means of evaluating how effective this has been.

An aspiration behind the JISC MLEs in HE programme was to critically reflect on the process and difficulties associated with MLE implementations in different institutions and to distil out the key lessons learned and mechanisms for supporting implementation which can then be used by others across the sector. The key lessons learned are included in this infoKit.

Building up a picture of your organisational context will be an iterative process which you can develop and expand upon throughout your MLE development work. This iteration is reflected in the design of this section which guides you through the sequence of issues and questions you might want to consider along with mechanisms for achieving these. Having worked through the section 'Why might you want an MLE?' you should now have a clear idea of why you want an MLE. In this section we begin to build on this and to consider the organisational context within which your MLE development is occurring. It will help to write a brief description of the nature of your proposed MLE development. You should aim to provide a brief summary of the scale, scope and intended outcomes. You may find it helpul to use the Project Initiation Document template from the Project Management infoKit. For example are you intending to totally integrate all your systems (finance, student records, VLE, timetabling, web sites, etc) or are you focusing in on specific aspects (linking your VLE with your student record system or integrating systems concerned with teaching and assessment)? Consider the following:

- What is the scope of the work and what will it broadly involve?
- How did the idea come about?
- What are the main reasons for doing it?
- Who is going to lead it?
- Who else will be involved?
- Who are the stakeholders?
- What are the potential organisational benefits?
- Are there any barriers which might affect your MLE development?
- What are the timescales for developing and implementing your MLE?
- What are the intended outcomes of the project?
- Where can you get additional advice, support or guidelines?

3.1. What do we mean by organisational issues?

- What do we mean by organisational context?
- Why is it important?
- What are the key aspects which constitute an organisational context?

Organisations are complex and multi−faceted and the identification of their nature and key functions and processes is important both at the initial fact finding stage of MLE development and throughout project implementation. You need to understand:

- the external environment and current drivers
- current institutional drivers and initiatives
- the alignment of your MLE development to other institutional strategy and policy
- how to use this knowledge to enable effective MLE implementation.

3.1.1 External Drivers

Providing guidance on carrying out MLE development is of course the main function of this infoKit, but it is also worth scanning the external context to see what else might be of relevance.

Some form of mapping of the external environment and relevant drivers and initiatives may have already been carried out within your institution. If this is the case you can use this as a starting point and pick out the relevant aspects for your MLE development. An understanding of the external environment can be achieved in a number of ways. A common method is by carrying out ***PESTLE*** (Political, Economic, Social, Technical, Legal and Environmental)and ***SWOT*** (Strengths, Weaknesses, Opportunities and Threats) analyses. These are often undertaken as part of strategic reviews or departmental away days. The resource links associated with this section provides some tools which you can use to help you do these. The sub−section on finding information will help you to identify relevant sources of existing information within your institution.

Having identified relevant external factors the next step is to assess their impact on activities within the institution, and in particular how they impact on your MLE developments. For example:

- Are there any timely external funding opportunities which you could bid for to complement your existing plans?
- How can you capitalise on lessons learnt from elsewhere? Are there useful resources and case studies which you can draw on?

The PESTLE and SWOT analyses are tools used to find out the current status and position of an organisation or department in relation to its external environment and current activities. This can then be used as a basis for future planning and strategic management. Focus in particular on PESTLE and SWOT in relation to your MLE development. For each factor within the PESTLE and SWOT matrices, consider the following:

- Which of the below are of most importance now?
- Which are likely to be most important in a few years?
- What are the factors influencing any changes?

3.1.2. Institutional context

You will need to build up a clearer picture of your own institutional context. This will involve building up a profile of the nature and structure of your organisation, an understanding of the context at different organisational levels, and distillation of local cultures and perspectives. You may also want to define the characteristics of your organisation, its mission, niche market position and business needs, along with the associated risk and cost benefit analysis of your MLE implementation. Further information on this is available in the resources section.

3.1.3. Institutional strategies and policies

An understanding of your institutional strategies is important because they provide an outline of how your institution carries out its key operations. A useful exercise is to identify the strategies which are of particular relevance to the MLE development and then consider how well joined up they are and how well they align with the MLE development. You should also think about where the MLE and e−learning developments might impact across these strategies.

The next step is to consider the mechanisms for translating the strategies into practice and again where the MLE development sits with respect to this. Part of this is about applying the knowledge and understanding of the external and internal environment to the MLE development, including identification of key barriers and enablers. For example what externally funded projects might provide useful resources? How can current internal projects be adapted or aligned with the MLE work? For example, is the finance department looking to procure a new system, has the medical faculty commissioned someone to develop them a Web portal, or is the registrar doing a review of admissions procedures and processes? How does this relate to any links with local businesses or schools? These are all potential activities which could impact on your MLE development. Linking of institutional activities is not only important in terms of avoiding duplication of effort, but also provides a mechanism for stakeholder buy−in by demonstrating how the MLE development benefits other activities in the institution. When mapping your MLE development to other activities it is important to be mindful of the timescales of each of the initiatives, as well as giving careful consideration to realistic timeframes for achieving things. In particular it is important to allow an appropriate length of time for initiatives to be implemented and evaluated. Having carried this mapping exercise out you may wish to alter your proposed work plan for the MLE development to align more with these other initiatives. You will however need to ensure that the scope of your MLE project is clearly defined and achievable. You may have a detailed plan for immediate priorities and an outline plan for later phases. Follow this link to the project Management infoKit to find out more about planning using a sliding planning window.

3.1.4. Stakeholders' perspectives

Finally, it is important to understand different stakeholder perspectives and agendas and to develop mechanisms for capitalising on this as well as managing expectations and dealing with political conflicts. You will have initially considered this in the section 'why might you want an MLE' and will return to it in terms of requirements gathering. Here we focus on the general stakeholders who need to be involved throughout the process. In particular it is important to clarify the needs of different stakeholders (such as academics, support staff, librarians, and senior managers) and to work with them and appropriate external organisations. This includes identification of different staff perspectives and analysis of the associated changing organisational roles and identities and the impact on changing practice. This is considered in more detail in the fact finding section and in the section on 'gathering requirements'.

3.1.5. Finding out what really happens

There are a variety of ways of finding out the above information, but it is worth noting now that part of the fact finding will invariably involve carrying out audits and mapping exercises. For example you might do audits of the functions and processes in different departments and then a mapping exercise of where they connect or overlap and identify potential gaps and how this information relates to the proposed MLE project. Audits might also focus on providing an outline of existing organisational structures and the mapping of existing practices. A major difficulty with this is making the tacit explicit, as much of the information resides with individuals rather than being formally recorded. To take the example of the lifecycle of the student recruitment: people involved in the activity will have multiple and overlapping roles and functions, processes will be carried out in different ways under different circumstances, the process is unlikely to be clear cut or linear, and is likely to include redundant and repetitive actions. Finally much of the knowledge and understanding of the process will be in the minds of those involved in the process, not recorded in any way. This will be drawn on almost intuitively with decisions being made based on past experience and local understanding.

This approach is supported by Banff &Buchan College who recognised that there is an need to review business processes and communication across the whole organisation.

The Process Review infoKit can help you with process mapping and analysis.

N.B. A number of resources are provided to help with some of the above activities and are available in the resources section.

3.1.6. Checklist for this section

PESTLE and SWOT analyses are useful tools here.

External environment and current drivers

Carry out a PESTLE analysis of the external context.

Questions to consider include:

- What are the current influences and external drivers which might impact on your organisation in relation to your MLE development?
- What current funding initiatives (for example funding calls such as the NLE, JISC or ESRC) could you apply for to supplement your activities?
- What are the current policy drivers and government priorities which might be of relevance (how will the new accessibility law for example impact on planned MLE developments)?

- What are the relevant internal drivers (impact of an institutional e−learning strategy for example)?
- What related developments from elsewhere could you draw on?

Institutional context

The SWOT analysis could be done at institutional, faculty and/or department level as relevant.

Questions to consider might be:

- Which strategy documents are relevant to the MLE development − do you have copies of these?
- What funding opportunities exist for you to bid to within your organisation?
- What other relevant developments are taking place in your institution (eg new Student Record System, finance system etc)?
- Are there any related department initiatives − portal or gateway developments which should be considered, incorporated or aligned?
- What are the current administrative issues and problematic processes which might be addressed as part of the MLE development? (Note the section 'Why might you want an MLE?' asked you to implicitly think about the intended outcomes and benefits of your MLE development)

Follow this link for key resources for this section (these open in a new window)

Follow this link for more resources for this section (these open in a new window)

3.2. Defining your organisational profile

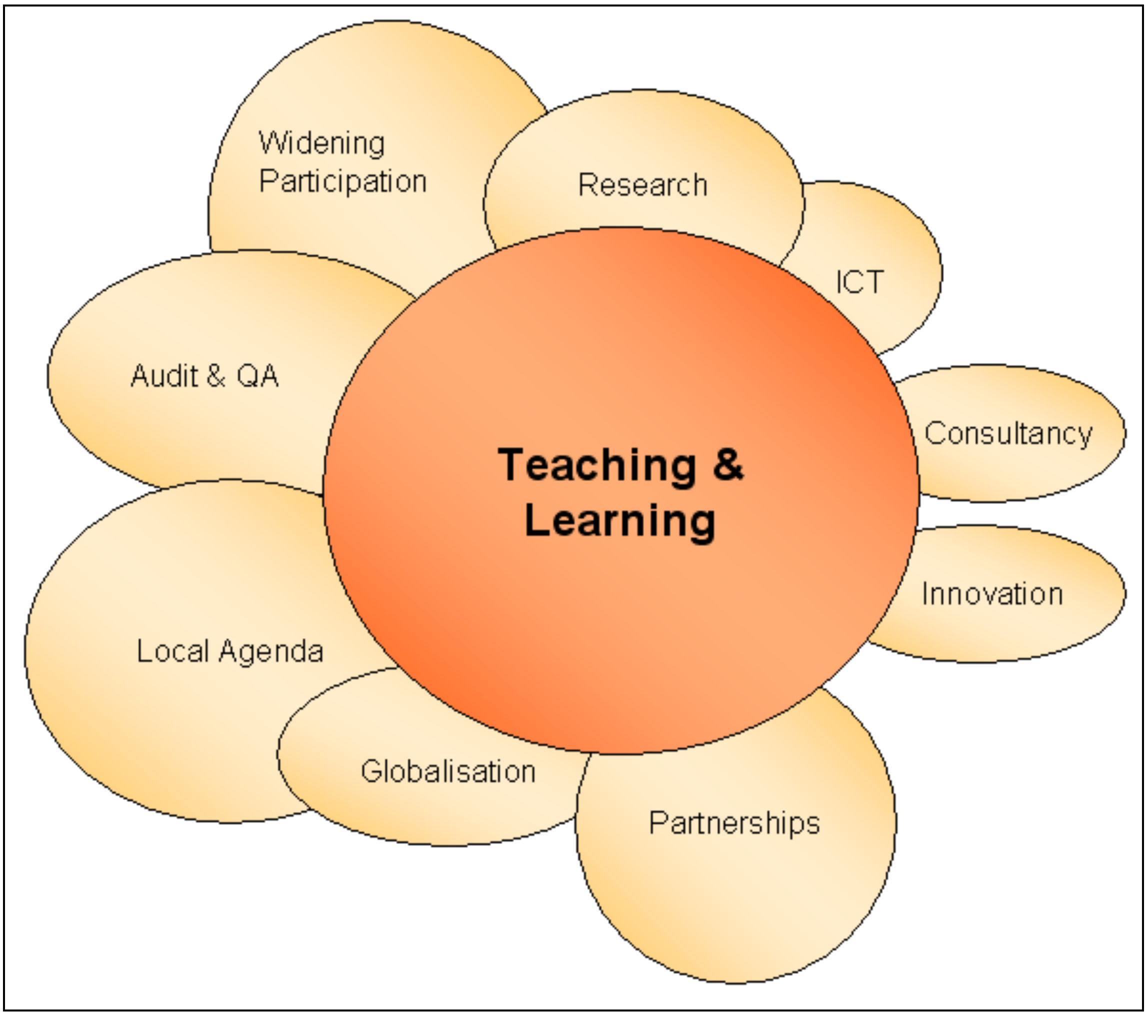
- What different types of organisations are there and what are their key characteristics?
- How can you identify which type your organisation is?

There are distinctive differences between the organisational structures and cultural contexts of different institutions and it is important to understand your local context. In particular there are major distinctions between large and small institutions, the FE and HE sectors and between old and new universities. These distinctions are reflected in both the organisational structures and the cultural context for the institutions. It is important to understand how the structure and operations of your institution will affect your MLE development.

The previous section helped you to map the external and internal context of your organisation and to pick out key barriers and enablers and how they might relate to your MLE development. The resources associated with this sub−section will help you understand typical institutional models and their characteristics so that you can take account of this in refining your understanding of your own organisational context.

3.2.1. Mapping the institutional landscape

The following diagram provides an example of an institution which is in essence primarily focused on learning and teaching as its main priority. The institution has a strong widening participation agenda and has committed to a studentcentred focus for learning and teaching. It has strong partnerships with local organisations, colleges and schools and aligns its institutional strategies closely with relevant local agendas. Quality assurance and enhancement are important as indicators of its focus on quality teaching and learning provision. The institution is less focused on research or consultancy, which is mainly driven through local ad hoc initiatives and opportunistic funding opportunities. The diagram shows these key areas of activity, along with an indication of their relative size and importance with respect to this primary focus and provides a snapshot of the focus and profile for the institution.



Draw up a similar diagram for your institution, considering the following questions:

- What is the core mission of the institution and the associated key words?
- What are the current agendas of importance?
- What are the main focal points of the strategic plan?
- What partnerships is the organisation involved with?

Building on the above you might want to undertake a more detailed institutional profile considering the following elements.

Sector

FE, HE (old, new)

Management styles

Core mission

Brief statement of core mission

Size

Size − number of staff (% academic and support staff), students (% full and part−time)

Profile of students

You could consider a number of indicators here, such as entry requirements, ethnic mix, age profile, etc

Funding

Sources of funding (% of income from teaching (government and other sources), research and enterprise)

Subject areas

Outline of key subject areas, list of faculties and/or departments

Culture

Key cultural features of the institute − research−led, student−centred, vocationally focussed, etc

Relevant strategic partners

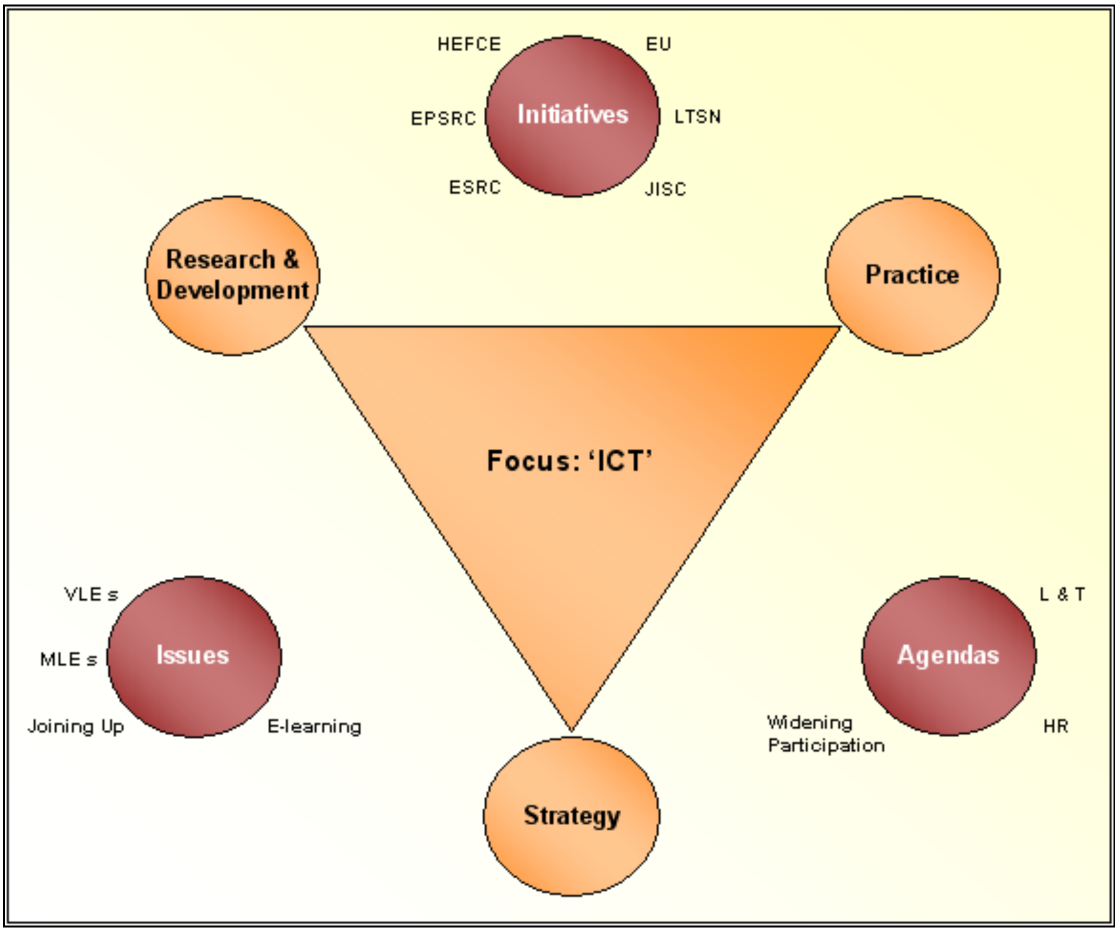
List of key partners such as feeder schools or colleges, relationships with local bodies or businesses, international alliances

Follow this link for key resources for this section (these open in a new window)

3.2.2. Mapping initiatives, agendas and issues

Having got a feel for your organisational priorities, you should now consider current external initiatives and drivers, relevant strategies and associated issues for some or all of the key activities (such as teaching and learning, research, ICT, etc).

The diagram below gives an example which focuses on ICT within a university context and aligns each of these broadly around strategy, practice and research.



3.2.3. Types of Organisations

Consider which of these models best fits your institution.

Bureaucratic

- Characterised by strong central management and top−down decision making.
- The hierarchy of control and decisionmaking is clearly established in the administrative and management structures of the institutions.
- Management roles are clearly defined as career progressions, heads of department, deans etc are appointed through an interview process to tenured positions.
- Central management have strong control over the direction of the strategic priorities for the institution.
- Commonly found in FE colleges and new universities.

Collegiate

- There is a dual structure of administrative and academic management which results in parallel committee structures which can act as a black hole for decision making.
- Unclear reporting lines and poor coordination, strong local cultures, agendas and identifies.
- Academic status is perceived as higher than support or administrative functions.
- There are strong subject−specific allegiances with academics often feeling a stronger alliance to their subject area and external networks than the institutional mission.
- Decision making occurs through committees, which can be slow and lack cohesion.
- Activities tend to be driven from the ground, primarily linked to local interests.
- Classic structure of old universities particularly those with more of a research focus.

Innovative

- Institutions with flexible structures geared to respond and adapt quickly to external factors and influences.
- Strong culture of change and innovation with frequent changes in directions of activities and focused of interest.
- Often characterised by a matrix structure of responsibilities by both subject area and functional activity (where the latter will often be structured around the identified strategic priorities.
- Typically activities focused around particular projects and associated project teams.
- Characteristic of some new universities and colleges but also present within the old universities within the sub−structure of the institution through enterprise centres and research centres which are externally funded.

Enterprise

- More closely aligned to traditional businesses and industry approaches.
- Acutely aware of financial mechanism and processes and alert to external opportunities.
- Traditional management roles and structures with clear demarcation of responsibilities and hierarchical decision making processes.
- Clear business objectives and plans based on detailed market analysis and needs.
- More common in America, particularly in some of the newer institutions which are focused on distance education.

3.2.4. Lessons Learnt: Understanding the nature of the organisations and processes

The development of an understanding of the nature of your organisation and monitoring the process of change is complex and multi−faceted. In particular many of the projects reported that moving towards effective implementation of e−learning, even when it is built into the strategic aims of the institution and has high level stakeholder engagement, is problematic in part because of the nature of change but also because of the difficulty of understanding and encapsulating how universities and colleges operate.

- There is a conflict between maintaining existing modes of working and adapting or moving to new systems and processes and models.
- There has been a significant shift in terms of the nature and potential composition of the environmental context within which universities work in the past few years. Previously the environment was relatively stable, with standard and established administrative processes and stable methods and technologies for learning and teaching. In some ways the converse is true for FE colleges which have suffered a constant wave of change initiatives and major structural reorganisations.
- The increased range and potential of new technologies over the past decade has begun to have a major impact, on organisational structures, roles and identities and new forms of learning and teaching innovation. Much of this is now crystallising through MLE developments which foreground these changes more visibly and by their nature demand cross−institutional engagement and impact.
- Stakeholders need to see the relevance to them, preferably being able to see that the benefits will be in the not too distant future.
- There can be a lack of appreciation and understanding of data ownership across different stakeholders, which is particularly highlighted when attempting to share across areas.
- It is important to change an understanding of how the organisation functions and the interaction between the physical flows of departmental information.
- Integrating existing legacy systems is difficult, complicated by the fact that many have been badly designed, with missing or inaccurate information.

- Typically the projects have highlighted that institutions know very little about existing data flows or organisational relationships and processes.
- Institutions lack effective cost−benefit models or performance analyses for evaluating the effectiveness of either traditional educational processes or elearning ones.
- Data systems tend to have been built up piecemeal to address the needs of separate functional areas within the organisation, there is therefore a need to build up accurate and complex data and organisational maps to record what is already happening within the institution prior to the MLE development.
- Mechanisms are needed for reviewing, redesigning and evaluating systems during the project and to assess user requirements.
- Projects used a variety of mechanisms for gaining an understanding of the nature of the organisation and associated processes, such as data flow diagrams and process maps, user surveys and user scenarios.

The lessons above have been drawn from researching project documents, and in particular from Jos Boys' report 'Learning Lessons from MLE Development projects − A review of the 7/99 JISC−funded projects', a commissioned JISC report.

3.3. Identifying issues

This section will help you identify key issues of relevance for your MLE development including:

- What mechanisms can be used to find out about the current culture of your organisation?
- Identification of which organisational and cultural aspects to include
- What tools and resources can be used?
- How can stakeholders be involved?
- How will this information be used?

Also see the section 'Who should be involved?' in 'Why might you want an MLE?'

What information should you be gathering?

This section offers a range of approaches. The approach you take will depend on the resources available to you.

Firstly you need to brainstorm about some of the things you might want to consider finding out about in relation to your MLE development. Secondly you will need to consider which are of particular importance and why. This will enable you to decide the degree of detail you go in to and hence the resource requirements. You should refer back to the information you have gathered on your organisational context and what has been identified as important contextual issues as part of the mapping exercise outlined in the previous sections. Thirdly you need to consider carefully the resource implications, in terms of how much time you have available to gather information, where you are going to get it from and who is going to be involved. If you are one individual tasked with gathering information then you will need to take a very different approach to an organisation which can invest more time and resources. You will however need to balance carefully the time and resources against the potential value of the information.

Give some consideration to where you might obtain information and how easy it will be to get. For example, will a general sketch of the institutional profile and a quick brainstorm of key priorities as they relate to your MLE development be enough information or do you actually need to do a detailed audit and mapping exercise? In addition you will need to be mindful of political sensitivities in obtaining information. What level of authority do you have? What are the agendas of information gatekeepers and how willing are they likely to be to share information with you?

Finally, give some consideration to how you intend to use the information and make a note of where you might want to follow up with a more detailed information gathering exercise at a later stage in the development plan. For example you might mentally list key stakeholders, then later expand this list in discussion with colleagues and later still formalise and ratify a definitive list through an appropriate steering group or committee.

Stakeholder analysis

This section will address stakeholders and how they can be identified and involved. An introduction to stakeholder management can be found in the Project Management infoKit. This topic is also discussed in the next section of this infoKit which focuses on requirements specification. It will also provide suggestions for the different activities which are needed to effectively identify and take account of organisational issues and suggestions for how these might translate into particular roles and responsibilities in terms of your MLE development activities.

A strong emergent theme across the JISC MLEs in HE projects was the importance of both stakeholder identification and engagement for the success of the project. It is worth spending some time at the beginning of the project to map out stakeholders, their relevance to, and interest in, the project and potential agendas and conflicts between different stakeholders. Typical stakeholders might include the following:

- Senior managers
- Heads of department
- Functional coordinators − such as learning and teaching coordinators, quality assurance representatives, research coordinators, IT liaison staff, etc
- Academics
- Support staff
- Technical staff
- Students

It is likely that the initial mapping of your institutional context will have given you a pretty good idea of who the key stakeholders are and their different perspectives. The fact finding section will give you ideas on ways of refining this and involving stakeholders in different parts of the programme.

Follow this link for key resources for this section (these open in a new window)

Follow this link for more resources for this section (these open in a new window)

3.4. Finding and using information

Finding out information can be time consuming, so it is important to be clear about what information you want to gather, how you are going to find it and how it will be used. For example if you have a clear understanding of different stakeholders and their agendas, this can be built into your dissemination strategy for the project and will also give you a clearer idea of who should be involved in the MLE project and at which stages. Similarly a knowledge of internal enablers (such as potential MLE champions, existing projects which might be linked more closely with the MLE work, funding sources which could be combined, etc) and external enablers (new portal software which might be included, guidelines and resources for MLE implementation, funding sources which could be used to supplement internal funds, etc) will allow you to consider how and when these might be used throughout the plan to best effect. The same is true with barriers and potential problems which might impact on the success of the MLE implementation.

This section outlines some of the techniques for fact finding and their pros and cons. These are only illustrative, a host of other data collection methods and techniques are of course possible and the references in the resource sub−section give pointers to further examples which you might want to consider. Also see the section 'Gathering requirements' on 'Trawling for information'. If you are one individual working on this it is unlikely that you will have either the time or the resources to use these in−depth however it is still useful to outline them for you as they will give you an idea of the range of methods and approaches that can be used.

Surveys and questionnaires
: Surveys and questionnaires are a standard means of data collection. They have the advantage of being easy to collate, with simple response and closed question types being amenable to quantitative analysis. However good questionnaire design is a specialised skill and requires considerable time investment to get meaningful results. Furthermore, there are often low response rates to questionnaires. One final point is the importance of careful targeting of respondents, which can be particularly difficult in terms of MLE developments where it is difficult to pin down who key stakeholders are and where they are located in different parts of institutions.

Interviews
: Interviews with key stakeholders can be a valuable mechanism for both initial fact finding and ongoing analysis of stakeholder views and perspectives on your MLE development. It is important to spend some time establishing who key stakeholders might be and their relevance or interest in the project outcomes. However, interviews can be both time consuming in terms of arranging, doing the interviews and then analysis of the results. You need to be clear about both the purpose and the format of the interviews.

Focus groups
: An alternative to interviews is to carry out a series of focus groups of representative stakeholders. As with interviews it can be difficult to find an appropriate time to get users together for the focus group. You may want to employ a range of strategies for organising focus groups in a way that is confluent with other demands on participants' time, such as carrying out a focus group at the end of an existing meeting or linking it in with a staff development event. Both interviews and focus groups can be used to provide a range of views about the organisation, political and economic issues facing your institution and the challenges and opportunities you might face with your MLE development. It is useful to build up different models of the nature of your organisation to capture these different aspects. A methodology for this is outlined in the modelling section, where the different metaphors for description organisations and the kinds of information they yield is discussed.

Participant observation
: Another technique for gathering data is observation; this can be used in a variety of circumstances such as observing the use of new software to establish usability issues or exploration of general navigational issues. Observation can also be carried out on user engagement in workshops or the use of materials to identify their effectiveness. Data can be gathered by a researcher taking notes on specific activities or outcomes and might be supported by a audio or video recording of the session. However, it is worth noting that the latter adds considerably to the analysis time in terms of transcribing and interpreting the recordings. If you do decide to carry out this more detailed analysis, you may need to identify additional sources of funding as it is unlikely that you will have core funding from your organisation to do this.

Process mapping
: Process mapping has been used by a lot of projects as a useful means of identifying existing structures and practices. One mechanism for achieving this is to build a systems picture of the institution having already obtained information about the management, service and department structures and processes and then using this as a means of developing a model. This technique has been used extensively for example as a precursor for establishing user requirements and specifications for Managed Learning Environments, but also in the development of specific software systems, Web sites and portals for specific purposes. See also the Process Review infoKit.

Project groups
: Project working groups, meetings and committees can all be a valuable source of information. Analysis can include interpretation of the discussions held during the meeting,

as well as analysis of documented meeting minutes. You may also want to consider using these as pseudo−focus groups for feedback on particular aspects of the project. This is a useful way of addressing the issue of the difficulty of getting different stakeholders together.

Document analysis

Analysis of documentation more generally can provide valuable insights into existing practices and structures. A variety of sources can be used such as minutes of other meetings and committees of relevance as discussed above, but also project plans and reports, departmental documents, strategic and operational plans, policy documents, handbooks and guidelines. In addition organisational charts and functional charts and role specifications are valuable data sources. These can provide a snapshot of current activities and also a comparison of how structures and functions have changed over time which can provide insights into the impact technology has had and the ways they are being embedding in learning and teaching and also the impact on organisational structures, roles and functions.

Interpreting and using your findings

There are a variety of ways in which the data you collect can be interpreted and used. It can provide a mechanism for undertaking an audit of current activity, for example by providing a snap shot of activities of relevance to your MLE development across an institution or an indication of the degree of uptake of a VLE across different subject domains. It can also be used as a mapping of existing MLE−related activities against structures and functions or as a means of monitoring change and benchmarking over time.

This section is not intended to provide a detailed outline of different analytical techniques but rather picks out common examples and approaches.

In terms of interpretation of the transcripts gathered from focus groups and interviews then a useful starting point is to go through the material and simply draw out the key themes and issues. You might like to begin by highlighting keywords and then move to trying to group related issues together. If you want a richer interpretation of the data there are a variety of research methodologies you can use, commonly used techniques include pre−coded classifications (ie classifications that others have already developed) or a grounded−theory approach (where themes emerge from the data). In addition, to these qualitative approaches a range of quantitative methods can be applied to material gathered through closed questionnaires or via systems usage and Weblog statistics, using a host of standard statistic tests and output mechanisms. There are a range of software tools which can be used to collate, manage and analyse such results, the most widely used being SPSS, but you may find that using a spreadsheet is adequate for your purposes. Again bear in mind the time investment against the benefits with learning new methods and familiarising yourself with different software. Similarly for analysis of qualitative data there are a range of software tools for managing and analysis such as NVIVO which helps in terms of coding, classification and analysis.

If possible it is a good idea to collect your information from a variety of sources and use a multi−modal data collection and analysis process as this is likely to provide you with a richer picture of what is happening. You may also want to return to the information you have gathered at a number of points during your project, reusing it for a variety of different purposes. Overall remember to be clear about what you want to find out, how you are going to do this and how it will be used.

Developing a fact−finding plan

In an ideal world you would have the time and resources to pick a rich mixture of the data collection methods outlined above. In reality your MLE project will be limited both in terms of budget and staffing and will be bound by time constraints. In addition it will need to fit in with other institutional activities and the external context as outlined in earlier sub−sections. Below are a series of questions you may wish to consider to help you devise a practical and realistic mechanism for finding out relevant information.

- What do you want to know and how will it be used?
- What sources are you going to use?
- What methods are you going to use?
- What resources do you have available to support this data collection?
- Who is going to coordinate the data collection?
- How is it going to be collected?
- Are there any ethical or political issues?
- If you are collecting data from more than one source how will these be combined?
- Which aspects of the overall MLE development plan will this information feed into?
- How else might the information be re−used elsewhere in the organisation?

Follow this link for key resources for this section (these open in a new window)

Follow this link for more resources for this section (these open in a new window)

3.5. The MLE in your institution: linking the project into other institutional activities

- What other important institutional activities are happening?
- How do these align with the MLE development?
- In what ways can other relevant institutional initaitives, projects and activities be connected?

In addition to mapping organisational issues to your MLE development plan, it is useful to think about how it relates or might be of use to other institutional activities.

Building an MLE involves change in both the service, administrative and academic functions of the institution. Therefore an MLE development, by nature, cuts across existing organisational structures and boundaries. This needs to be accounted for in how the project is managed and aligned with existing institutional structures and activities. Your MLE project therefore needs to be linked to broader institutional issues, activities, timescales and priorities. Careful alignment of the MLE project alongside other institutional activities will help maximise benefit and is another way of demonstrating the importance and value of this work.

Be aware that the timing of your project activities may well have to be adapted quite significantly in the light of other institutional priorities. In particular the JISC Building MLEs in HE projects identified that project activities most sensitive to change in this respect were the softer organisational and human issues, such as stakeholder perspectives, and associated training and staff development needs, as well as the difficulty of mapping tacit processes. However, conflicts can also arise with technical implementation, particularly around issues of local ownership and control and with different stakeholders wanting to continue with existing practices and processes.

It is also useful to identify and link the project to relevant current institutional directives, such as e−learning, learning and teaching or estate strategies and to find out the status of each of these, the mechanisms by which they are being progressed and how they are inter−related. Interlinking of the project with other strategic activities serves a dual purpose of stakeholder engagement and commitment as well as functioning as a dissemination activity. See the dissemination sub−section for more on developing your dissemination plan. Align the lifecycle of the project as much as possible with the lifecycle for other relevant strategies and initiatives. For example who in the institution is responsible for taking the e−learning strategy forward? What stage is it at? What is its status? How does it relate to other strategies? What impact does the MLE project have on it and vice versa? Clear articulation of the benefits of the project within the context of the different strategies is a good way of evidencing the value of the project and gaining stakeholder engagement.

3.5.1. Linking into institutional lifecycles

What are the key institutional lifecycles and how does the MLE development map to them? Is there information from the MLE development lifecycle which could usefully be fed into the other lifecycles or vice versa? Are there some activities across the lifecycles which could be combined?

It is worth carrying out an audit of other key institutional activities and lifecycles and considering in which ways the project can be aligned to these. An obvious one is sensitivity to the academic calendar and alignment of the project to not clash for example with busy pressure points in the year or, alternatively, times when it may be difficult to get users together for other reasons. Lifecycles to consider include:

- The academic year
- Strategic and operational planning
- Local faculty or departmental meetings and committee schedules
- Institution−level meetings and committee schedules
- External events and cycles − such as quality audit or the research assessment exercise for HE institutions
- Funding cycles
- Any other cycles (for example recruitment, summer schools, etc)

Another tactic that you might consider is alignment of the project with related cross−institutional activities. One mentioned already is the development of institutional and local e−learning strategies. Others to consider are staff development and training activities, or specific agendas such as widening participation or accessibility.

3.5.2 Your Institutional Lifecycle

Experience from other MLE developments suggests that some understanding of institutional lifecycles and how your MLE development relates to them is valuable. The following questions will help you list these and consider their relationship to your MLE development.

1. List any key institutional lifecycles which might be of relevance to your MLE development. These may different in terms of scale and timescales. For each you may want to consider what the key activities are and when they occur, who is involved in the process and what the outcomes area. Examples of lifecycles to consider include:
    - ♦ The overall academic year
    - ♦ Strategic and operational planning
    - ♦ Local faculty of departmental meetings and committee schedules
    - ♦ Institution level meetings and committee schedules
    - ♦ External events and cycles − such as quality audit and the RAE
    - ♦ External funding programmes
    - ♦ Internal funding initiatives
    - ♦ Roll out of a new technical system
    - ♦ The recruitment process
    - ♦ Curriculum development
    - ♦ The exam timetable
    - ♦ Institutional audit
    - ♦ Subject quality review
2. How do these relate to your MLE development?
3. Is there information from the MLE development lifecycle which could usefully be feed into the other lifecycles or vice versa?
4. Are there some activities across the lifecycles which could be combined?

3.5.3. Lessons learnt: alignment and institutional buy−in

These lessons have been drawn from researching project documents, and in particular from Jos Boys' report 'Learning Lessons from MLE Development projects − A review of the Building MLEs in HE JISC−funded projects'

- It is important to give consideration of alignment of the MLE development with relevant funding mechanisms and cycles and in particular to have a process for moving from project to institutional embedding.
- MLE developments are often labelled as technical, leaving the organisational and pedagogical issues unresolved with lack of clarity about the projects' authority with respect to these. There is often a lack of clarity about the relationship between the project and the institutional context.
- The extent to which MLE developments came out of or was integrated with institutional strategies and other policy initiatives varies.
- Those involved in MLE developments can have an awkward relationship to their institutions − needing to be both independent outsiders − with authority and credibility, as well as also working across institutional levels.

3.6. Staff development, training and support

- What are the current skill levels of staff and students in relation to using relevant parts of the new MLE?
- What training and support mechanisms need to be put in place to support effective implementation of your MLE development?
- How can staff development be used as part of the education and communication process in terms of demonstrating the role, relevance and importance of the MLE to different stakeholders?
- How can the support for your MLE development be integrated within existing staff development activities?

This is discussed in more detail later in this infoKit in the sections on implementation and embedding. See in particular the section on support in 'Implementation' and the section on staff development in 'Embedding'. This section gets you to begin thinking of staff development, training and support issues specifically with respect to understanding your organisational context, what types of support mechanisms and processes are already in existence and which might need to be developed.

It is important to identify and address the different training and support needs during and beyond the lifespan of the project. This will include a range of activities, from stakeholder engagement and education, through to specifics in terms of use of the MLE and potential pedagogical models. Support needs to be considered across all stakeholders and is likely to take a variety of forms, one−to−one discussions, group meetings, presentations, focus groups, workshops and guidelines. It is important to be sensitive to the needs of different stakeholders and match support appropriately. One key issue is to try and articulate what each of the different stakeholders actually need and require and how this best might be achieved.

Part of this process involves the identification of skills gaps and in particular ICT literacy needs and consideration of appropriate staff development and support mechanisms. This skills gap identification is one of the first activities which need to be undertaken as part of the development of a staff development and support plan to sit alongside the MLE implementation. Issues of support and reward mechanisms in the changing context also need to be considered. Students are a stakeholder group with particular needs. In particular there is a need to move to accommodating a more diverse, and flexible student population, with changing literacies and student expectations. Across stakeholders, but particularly for students, there is likely to be an increased demand for seamless integration and user focussed systems tailored to individual needs.

3.6.1 Developing a staff development plan

The stakeholder analysis and mapping of your institutional context will have provided a good idea of existing levels of understanding about MLE development and where there are gaps. This series of questions will help you to refine your understanding in order to develop a staff development plan to support MLE development.

- Think about what staff development, training and support already exists
- How might existing support be used or adapted for your MLE development?
- What are the skills levels of your identified stakeholders in terms of understanding the MLE development relation to using the new MLE?
- What are the skills levels of the intended end users of the new MLE?
- What training and support mechanism need to be put in place? Examples might include

    - A series of hands−on staff development session providing training on the use of the system and to reassure staff of how they will be affected by the introduction of the system.
    - Hand holding of users during their perception of a difficult transition from their existing practices through education of how to use the system and identification of the benefits.
- How can staff development be used as part of the education and communication process in terms of demonstration the role, relevance and importance of the MLE to different stakeholders?

3.6.2 Lessons Learnt − Communication, understanding and awareness raising

These lessons have been drawn from researching project documents, and in particular from Jos Boys' report 'Learning Lessons from MLE Development projects − A review of the 7/99 JISC−funded projects', a commissioned JISC report.

- It is important to address different stakeholder needs and manage expectations.
- As awareness and perceived relevance of the importance of VLE/MLE developments were increasing, many of the projects found that the status of the developments increased and became more embedded and linked to relevant institutional decision making bodies and committees.
- Be aware of the difficulties in obtaining and maintaining real institutional buy in. Many projects encountered a good deal of resistance and this can lead to a great deal of unproductive time being spent in attempting to deal with these conflicts and political issues and coordination of the project with other initiatives.
- Lack of understanding and experience of the nature of elearning and its potential can be problematic. Many staff and students still have little real understanding of the possibilities.
- As stakeholders begin to see that building an MLE is possible and within a reasonable timescale, they become more enthusiastic about the possibilities and are more inclined to want to put the effort into making the system well designed and relevant to their needs. There can also be a cascade effect with more academics, administrators and support staff beginning to be interested in the potential.
- Stakeholders need to see the relevance to them, preferably being able to see that the benefits will be in the not too distant future.
- There is a need to re−educate users in terms of shifting from paper−based to online information.
- Managing expectations is critical particular when expectations have been raised in terms of what is possible, coupled with a general lack of understanding of potential technical and

organisation issues and limitations.
- At institutional level there is less recognition that MLE development is not merely a piecemeal addition to existing academic, information, administrative and technical processes but demands their rethinking and restructuring.
- An MLE development can be used as a valuable vehicle for debate on the nature and function of elearning as well as a means of achieving commitment from senior management. Outputs from fact finding exercises − such as data flow diagrams, user surveys, etc can be used as a method of consultation and dissemination.
- Issues in the differences in terminology over both existing processes and MLE structure can be used as a key way into debate and consultation about restructuring educational and organisational processes.

3.7. Planning dissemination and evaluation

This section will help you to consider the following:

- Identification of key dissemination mechanisms which can be used as communication channels during the project
- The role of evaluation as a tool for monitoring the progress of the project and to inform development.

Further information on this topic is available in 'Design Outputs' in 'MLE Design', 'Communication' in 'Implementation' and Sustaining the MLE in 'Embedding'.

A significant part of any MLE project is education about both the nature and purpose of an MLE, and reporting on project progress. This can have a dual function of both gaining stakeholder engagement and managing expectations of what is realistically achievable. The concept of an MLE is subtle and different stakeholders are likely to have different ideas of what it consists of, along with anxieties about how it will impact of their roles and functions. You should consider developing a coherent dissemination strategy for the project which has a range of dissemination outlets along with their intended function and audience. Typical mechanisms for doing this include − establishment of a project Web site, internal presentations to the project steering group and at working group meetings, involvement in relevant external conferences, reporting through existing university structures such as department meetings and university committees.

Similarly you will need to develop an evaluation plan. This can be used formatively during the project to inform the project activities and summatively as a means of measuring project success against agreed objectives and outcomes. This is an important means of demonstrating project success and ensuring stakeholder engagement.

3.7.1. Mechanism for Dissemination

Having gathered information of relevance to your MLE development and analysed the results it is important to give careful consideration of how and where to report on the findings and to map potential audiences and stakeholders. City University found that 'A comprehensive communications strategy is vital to an implementation project of this scale. It needs to encompass both formal and informal mechanisms fo communication and to work to address concerns as well as promoting the service'. There are a variety of dissemination mechanisms and outlets, from peer−reviewed academic journals through to presentations and oral reports. The table below lists potential dissemination outputs and suggestions of when they might be used.

Dissemination vehicle	Function
Report	Project progress or summary reports about a particular aspect of the work.

Web site	Information about the MLE development, progress, project outputs such as survey results or guidelines developed.
Email or mailing list	You may consider setting up one or more mailing lists for those involved in your MLE development. One might be for the steering group and be used essentially to provide updates on progress. Another might be used by the project working group to discuss specific project issues. In addition you may want to email individuals or other institutional mailing lists about particular aspects of the project.
Presentation	Verbal presentation sometimes supported by a report/Powerpoint presentation or summary notes/overheads. Can be used both for in−house meetings (departmental, project, etc) and external meetings (conferences, workshops, etc.).
Workshop	Workshops can have a variety of purposes; as a mechanism for gathering information, for dissemination or as a means of staff development.
Verbal presentations	Verbal presentation or update or results, may be used in a range of forum, from informal one−to−one, through departmental meetings or at more formal steering group or external meetings.
Peer−reviewed journal	Detailed research−orientated structured report/paper.
Newsletter	Regular update of project outputs and short news stories.
Conference Presentation	Presentation of findings at a conference, usually adapted/tailored towards aspects of the conference theme and networking with others who are carrying out similar projects.
Promotional leaflet	Short summary guide or dissemination paper−based format.
Press release	Semi−formal summary of main findings usually for a targeted audience.
Poster	Used primarily at conferences. Usually consists of a series of A4 or A3 laminated sheets.

3.7.2. Developing your Dissemination Plan

These are some suggested headings for your dissemination plan.

- Scope
    - Describe the purpose or the main message you want to communicate
- Content
    - What will be included from your findings
    - What other reference material will you need
- Preparation
    - What specific opportunities are coming up that are relevant for this?
    - How much time will you need to prepare for using this technique
    - What specialist skills will be required?
    - When do you need it ready by?
- Process
    - Who will do it?
    - When will it be carried out?
    - How long will it take?
    - How many times will this be done (eg repeat on a regular basis, update monthly)?
- Audience

  - Who is your audience?
  - What is the size of the audience?
- Resources

  - What resources will you use?
  - Are the resources booked?
  - Do you need a room?
  - Who will be involved and how?

3.7.3. Developing your Evaluation Plan

This is taken from ILRT's Evaluation Toolkit, which can be found at http://www.ltss.bris.ac.uk/jcalt/. You may find it useful when developing your evaluation plan.

An evaluation plan will help you

- identify the intended participants or audience for the evaluation (stakeholder analysis)
- define your evaluation questions
- focus on defining the complexity or scale of the proposed evaluation study
- take into account the associated time and resource (both financial and human) implications.

There are five principle questions to consider:

- What are you evaluating?
- What are your reasons for carrying out the evaluation?
- What is the context within which your evaluation takes place?
- Who is the evaluation for?
- What evaluation questions are you going to ask?

Step 1. What are you evaluating?

It is possible to evaluate both processes and products, depending on your focus of interest. You may want to evaluate the success of your MLE development against the project plan, alternatively you might be interested in understanding the barriers and enablers to implementation. It is important to be clear about the focus of your evaluation as this will influence the data collection used and the findings. Provide a brief description of what your evaluation will focus on.

Step 2. What are your reasons for carrying out the evaluation?

The table below lists a range of reasons why you might want to carry out an evaluation. Consider these in relation to your MLE development and decide which are appropriate. For example you may be focusing on ?selecting? as part of your MLE development might be about choosing and integrating a commercial VLE with other systems in the institutions. Alternatively you may want to understand the issues surrounding MLE development in which case the nature of your evaluation will be more ?explorative?. A common focus for evaluation is trying to assess value for money and cost effectiveness.

Reasons	Examples and/or perceived benefits
Selecting	• Selecting a VLE for example
Monitoring	• Checking that a project is running on time and to budget
Validating	• Demonstrating a project has met its objectives

	• Gathering evidence to demonstrate that the MLE development has resulted in improvements of some kind − for example in administrative processes, or access to institutional information
Arguing/Justifying	• Documenting the reasons for choosing a particular system or approach • Presenting a case for replacing traditional processes with the new MLE
Improving	• Exploring how the new system leads to improvements or efficiency gains of some kind • Usability testing of the MLE to improve the interface
Researching/Exploring	• Gaining a better understanding of the way in which users use the MLE • Identifying ways in which the MLE is changing the way people do things eg students work collaboratively • Exploring the issues around the MLE development and identifying barriers and enablers

Step 3. Context of the evaluation

This allows you to consider the resources and expertise which you have available to carry out your evaluation and timescales and any constraints.

Reasons and benefits
• What are the reasons for carrying out your evaluation? • What are the benefits of doing your evaluation? • What will you know at the end that you don't know now? • What will this enable you to do?
Timeframe
• When are you planning to undertake this work and when does it need to be completed? • How long will the evaluation work take approximately?
Resources
• Is there a group of users associated with this? • If there are users associated with the evaluation, give details of the number and their level/background experience. • Who will be doing the evaluation? • What resources have you got available? • Is there a budget to support the evaluation activities?
Scale
• What is the scale of your evaluation? • Is it self contained or integrated with other activities?
Wider issues and implications
• Is there anyone that you want to persuade? • Who else wants you (or doesn?t want you) to do this evaluation? • How will the information you discover change the way you work?

Step 4. Who are you doing the evaluation for?

This section will help you to define key stakeholders in your evaluation. Although ?stakeholders? are sometimes defined as the groups who have the ability to influence the situation, here the term is used to refer to anyone who has a stake in the evaluation process or the activity/implementation.

The table below lists a set of potential stakeholders and some ideas for what their concerns might be. The list of stakeholders and of concerns is not intended to be authoritative or exhaustive; users should adapt the list to their own local circumstances, adding in−groups and/or concerns as appropriate.

- Select the stakeholders who are important for your evaluation (or add your own stakeholders).
- Select appropriate concerns or add to the list with your own examples.
- Remember you are invariably one of the stakeholders and you should include this in your choice. You will need to decide which of the categories you fit into.
- We recommend that you limit your choice to a maximum of two or three stakeholders only and would also suggest that you allocate one of these as the primary focus for the evaluation.
- Try and also identify a maximum of three concerns from your list which you can work with in the next stage of the process

Evaluation stakeholder analysis	
Stakeholder	Suggested concerns
Student	• Students experience of using the MLE • The relevance of the MLE to their learning • The ability to find information of relevance and use to them to support their learning and help them manage their modules
Developer	• Ease/difficulty of access • User interface, subject content • Bugs
Lecturer	• Time need to become familiar with the new MLE • Ways in which the MLE improves administrative processes • Ways in which the MLE can be used to support their teaching • Ways in which the MLE will result in timesaving
Manager	• Efficiency Cost−benefits • Student retention • Pass rates • Better communication mechanism across the institution
Support staff	• Whether the MLE will require additional support, maintenance, etc. • How well the development is integrated with other services
Funder	• Transferability • Increasing knowledge • Quality of the learning experience • Value for money • Input to policy • Whether objectives have been met
Researcher	

	• Does it advance a theory or support a particular hypothesis • Might this lead to valid, publishable material • Does this uncover a new body or knowledge • Will this give a better understanding of the learning process and/or experience

Step 5. Devising the right evaluation question

The questions prioritised as the focus for your evaluation can have a large impact on the design of the study. Additionally, the different stakeholder groups will see certain types of questions and the resultant data collected as more persuasive than others. For these reasons, it is important to be aware of the range of different types of questions that could be asked. The table below gives you some examples of the types of questions you might consider asking.

Exploratory questions

Think about a question with a stem using words and phrases such as, 'what?', 'when?', 'for whom?', 'under which circumstances?', and so on. Stems for this type of question include:

- What are the perceived benefits of..
- When is the best time to?
- Who likes?
- Under which circumstances do students?

Comparative questions

Consider questions looking at alternative resources or using another 'type' of student, or involving some other related situation. Stems for this type of question include:

Compare your evaluation with

- what happened last year
- the support mechanisms students current have to support their courses
- how lecturers find and use institutional information at the moment
- a related MLE development elsewhere
- with some specific benchmark data

Measurement questions

Consider your question in terms of scores, tests or performance. Could look at cost, time, number of occurrences, number of errors, number of people satisfying certain conditions, and so on. Stems for this type of question include:

- How many?
- How much?
- How long?
- How often?
- What percentage?

Negative or opposite−type questions

Construct a question so that it forms some sort of 'opposite' to the concern. So, for example, if the concern is about maximising benefits, think about limiting disadvantages; if it is about widening opportunities, think about possible exclusion; if it is about changing things, think about understanding what the current situation is. Stems for this type of question include:

- worst than

- problems
- fails
- disadvantages
- limits

3.8. Models and frameworks

3.8.1. Understanding the concepts

This section will outline some of the models and frameworks which you might find useful in understanding organisational issues and their relationship to MLE developments. Aspects of this are also considered in sections 'Requirements specification' and 'MLE Design'. The approaches outlined in the sub−section can be used in a number of ways:

- As a framework against which to understand your findings
- As a benchmark to relate your MLE experiences against others
- As a shared framework for engaging stakeholders in dialogue
- As a planning tool for future developments

This is important because opinions on the nature and role of an MLE, and the role of e−learning specifically, vary across different stakeholders and include:

- Cost savings
- Quality enhancement
- MLE implementation as primarily administrative
- MLE implementation as primarily concerned with widening access

The next section on 'gathering requirements' will explore these viewpoints in more detail.

Typically there will not be a common consensus across stakeholders of the reasons and benefits of e−learning. Considering your institutional context against a variety of different models will help to highlight different aspects and perspectives. Two examples are described − the use of modelling and metaphors.

3.8.2. Modelling

The viable system model (VSM) is a technique for modelling institutions drawn from management cybernetics. It provides a way of exposing and understanding the underlying structures and functions of an organisation. The cybernetic methodology is cyclical and iterative in nature and consists of the following stages:

- Observing − finding out about the problem
- Describing − structuring the problem
- Modelling vReporting − diagnosis and design
- Implementing

The benefit of systems thinking is that it encourages both stakeholders and designers to think in loops and develop a shared understanding of the problem domain. In particular it allows them to develop a clearer understanding of the nature and intended function of an MLE within their institutional context and what the perceived benefits of an MLE will be to the institution and their individual perspectives. More detail on this is provided in the resources for this section.

The Unified Modelling Language (UML) can be used to produce a structured model of the operational and functional processes of the institution, from which the technical specification and associated system can be produced. Many of the Building MLEs in HE projects found the use of

UML and its associated tools as a valuable modelling technique. However, some found the method over−heavy for their needs so you should think carefully again about your own needs and associated time and resource constraints. A basic introduction to UML is included in the Process Review infoKit and more information on UML can be found later in this infoKit in the section on design.

3.8.3. Metaphors

Organisations are complex and paradoxical and can be interpreted in many different ways. Organisational analysis can be a valuable means of reading and understanding organisations. Understanding can be developed through the use of metaphors and images to describe the nature of the organisation, which can then be used as practical tools for designing new organisational structures and functions, and for diagnosing any problems or management issues associated with your MLE development. The use of metaphor implies a way of thinking and seeing which shapes understanding. A useful set of metaphors has been developed by Gareth Morgan who suggests that you might want to think about your organisation as a:

- Machine
- Organism
- Brain
- Culture
- Political system

3.8.4. Lessons learnt − Concepts of MLE Development &e−learning

These lessons have been drawn from researching project documents, and in particular from Jos Boys' report 'Learning Lessons from MLE Development projects − A review of the 7/99 JISC−funded projects', a commissioned JISC report.

- Awareness raising and clarification of the concept of an MLE is important.
- The concept of an MLE is abstract, open to subjective interpretation and there are not usually common agreed understandings across different stakeholders.
- There are often different driving forces behind the development of an MLE. For some stakeholders it is about the development and joining up of a VLE with an emphasis on the pedagogical and elearning aspects and in particular in an aspiration to improve the student learning experience. For others the focus is more service and administratively focussed, with an emphasis on providinge web−based access to university services and information in general and hence less of a focus on teaching and learning.
- The nature of existing pedagogical, organisational and technical structures and processes are highly complex, often incompatible and poorly understood.
- There is a lack of generally agreed models of the MLE development process.
- There is a tendency to conceptualise the problem around the integration of existing systems.
- The ways in which processes and systems are described and divided up is not coherent either within particular institutions or between them.
- The emerging terminologies around MLE development are not shared or agreed.
- There was no apparent clear consensus on the reasons for and benefits of elearning.
- It is difficult to assess the benefits and costs of MLE developments.
- Institutions do not have consistent procedures and measures for evaluating either conventional teaching modes and methods or elearning.
- It is difficult to estimate the true cost of implementing elearning.

Section Editor

Grainne Conole is Professor of Educational Innovation in Post−Compulsory Education at the University of Southampton, with research interests in the use, integration and evaluation of Information and Communication Technologies and e−learning and impact on organisational change. She was previously the Director of the Institute for Learning and Research Technology at the University of Bristol, a centre of excellence on the development and use of information and communication technology in education. She has extensive research, development and project management experience across the educational and technical domains; funding sources have included HEFCE, ESRC, EU and commercial sponsors). Before moving to Bristol in 1999, she held a senior position at the University of North London as head of technology−based learning, with institution−wide responsibility for recommending strategy and policy developments in the academic use of ICT. The post included the establishment and direction of a newly created Teaching and Learning Technology Centre, including ICT research and development activities. Grainne's background is in Chemistry. She completed a PhD in X−ray crystallography in 1990 and was a Senior Lecturer until 1995, with a research interest in organometallic cluster compounds. She serves on and chairs a number of national and international advisory boards, steering groups, committees and international conference programmes. She has published and presented over 200 conference proceedings, workshops and articles, including over 50 journal publications on a range of topics, including the use and evaluation of learning technologies and is editor for the Association of Learning Technologies journal, ALT−J.
