



Final Study Report

JISC User Requirement Study for a Moving Pictures and Sound Portal

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Overview of the Study

This study is a user requirements investigation for a moving pictures and sound (time-based media) portal for the UK Joint Information Systems Committee (JISC). The study assesses what users (i.e. teaching staff, researchers, practitioners, developers and support staff) within HE/FE will need when accessing time-based media via a portal and is intended to inform the creation of a portal for moving picture and sound data within HE/FE. The study was undertaken through a consultation process involving a range of methods such as interview, inquiry group, telephone survey and a workshop. The study builds on outcomes, networks and expertise from the JISC 5/99 development projects – Click and Go Video investigating the educational value and use of video-based media resources and Results, which analysed portal needs and technologies for learning and teaching support staff. The study has produced a report describing the requirements of users for a time-based media portal in accordance with the objectives outlined below in Section 3. The report also includes recommendations for each objective.

1. Background

Portals are an integral component of the JISC Information Environment (IE) acting as the point where content is brought together for display to the user. According to JISC FAQ, a portal is described as “a network service that brings together content from diverse distributed resources using technologies such as cross searching, harvesting, and alerting, and collate this into an amalgamated form for presentation to the user. This presentation is usually via a web browser, though other means are also possible. For users, a portal is a, possibly personalised, single point of access where searching can be carried out across one or more than one resource and the amalgamated results viewed”. The IE Draft Development Strategy has incorporated this approach into the Portals and Fusion Programme, which is building and developing portals and portal technologies for use within the Information Environment. A Baseline Portal Functional Specification has been drawn up from the Functional Model of the JISC IE Architecture and provides a list of key functionality for portal implementation drawing on the use cases for *enter, survey, discover, detail* and *useRecord*. The JISC Moving Pictures and Sound Working Group (MPSWG) has identified the creation of a portal for time-based media as a potential area of development in enhancing access to resources. Moving image collections for use within HE/FE are starting to become available with the support of MAAS and BUFVC. As the area grows, the need for users to be able to easily and quickly access information about all these collections and the data in them will become paramount. However, as the JISC IE Draft Development Strategy notes, “*finding and using the right resources is not easy*”. The Study has aimed to identify current methods of discovery, location and use, what users would require from a portal service, and how access to time-based media collections could be enhanced within learning, teaching and research.

2. Objectives of the Study

The objectives of the user requirement study as outlined by JISC are as follows;

1. *To discover who uses moving picture and sound collections and data within HE and FE and select a representative sample for analysis.*
2. *To find out what the requirements of these users are for a time-based media portal.*
3. *To discover what developments would enhance the use of such materials beyond their current requirements.*
4. *To assess how users discover, locate and use such data at this time to inform the enhancement of such processes through the portal.*
5. *To consider how access to time-based media could be enhanced within learning, teaching and research.*
6. *To consider those users who do not currently use time-based media in their work/study and to report on what requirements they might have for use of such materials, and what barriers there are preventing their use.*
7. *To investigate what relationship a time-based media portal might usefully have with a portal for still images.*

3. Activities and Outputs

The table below indicates the duration of the project, the number of activities undertaken and the outputs completed.

Period	Activities completed	Outputs completed
Jan 03	Identify participants for interviews and inquiry groups	Project Work plan
Feb 03	First Review Group meeting 5 th February Interviews (Identifying methods of discovery, location and use and current teaching practice) Telephone survey strategy	Project Report to Review Group
Mar 03	Telephone survey Telephone survey analysis Interviews (Identifying methods of discovery, location and use and current teaching practice) Analysis of interviews	Early Findings Report to JISC

Apr 03	Inquiry groups (collating user requirements) Inquiry group analysis Workshop event planning	Project Report to Review Group
May 03	Writing up of consultation document and circulation Workshop event planning	Consultation Document to Review Group
Jun 03	Workshop Final Study Report and recommendations	Final User Requirements Study to JISC

A **Review Group** was formed to advise and guide the progress of the study. Two of the members contributed to an inquiry group and the workshop. The members of the Review Group were:

Clive Young, General and Professional Studies (GAPS), Glasgow Caledonian University.

Jim Strom, Advance Telematic Centre (ATC), the University of Manchester.

Mike O'Donoghue, CSALT, Department of Educational Research, Lancaster University.

Steve Richardson (The University of Manchester) contributed to the inquiry groups and provided technical input to the Final Study Report using his expertise from the JISC/DNER Results project to provide background on portals.

4. Methodology

Any user requirements study must include both a strategy to reach current and potential users (including those without contact with current services) and a methodology to establish, refine and validate a consensus view. The methodology was based on a process of consultation starting with the individual and progressing through the inquiry group and on to the wider user, and potential user community. There were four components to this process:

1. Interviews
2. Inquiry groups
3. Telephone survey
4. Workshop

4.1 Interviews

The face-to-face interviews were combined with observation of current users in natural settings. These captured different strategies to discover, locate and use current distributed electronic resources for moving and still pictures and sound. The users included teachers, lecturers, professors, developers, support staff, and researchers. A total of 13 users (3 from FE and 10 from HE) from a range of different subject disciplines took

part in this first stage of the study. **Table 4.1** below shows the institutions, groups or subject disciplines that have taken part in the interviews and inquiry groups.

<i>Angus College</i>	<i>Computing and Information Technology</i>
<i>Cardonald College</i>	<i>eLearning</i>
<i>City of London</i>	<i>Business and Management Studies</i>
<i>EDINA</i>	<i>Education Media Online</i>
<i>RSAMD (Royal Scottish Academy of Music and Drama)</i>	<i>Music</i>
<i>Lambeth College</i>	<i>Film Video and Photography</i>
<i>Manchester City College</i>	<i>eLearning</i>
<i>Manchester Metropolitan University</i>	<i>Media Services</i>
<i>Robert Gordon University</i>	<i>Health Sciences</i>
<i>SCRAN</i>	<i>JISC Still Images Portal</i>
<i>Surrey Institute of Art and Design University College</i>	<i>Time-based and Digital Media</i>
<i>The University of Manchester</i>	<i>Advanced Telematics and eLearning</i>
<i>Trinity College University of Wales</i>	<i>Media Studies and Communication</i>
<i>UMIST</i>	<i>Management and Chemical Engineering</i>
<i>University of Glamorgan</i>	<i>Media Services</i>
<i>University of Portsmouth</i>	<i>Pharmaceutics and Microbiology</i>

Table 4.1

The purpose of the interviews was to stimulate individual reflection upon experience and act as a starting point to engage participants in identifying what their requirements for a portal might be. The interviews also explored the way in which video, audio and still images are integrated into current teaching practice, both from a pedagogical and a technical perspective (e.g. via local VLEs). The interviews were generally from 30 to 40 minutes in duration and permission was asked to record the interviews on tape. The interviews took a phenomenographic approach (i.e. they were relatively unstructured), and focused on personal experience (Marton 1994), however some key common questions were included in order to identify strategies to discover, locate and use current distributed time-based resources (see **Appendix 1**).

4.2 Inquiry Groups

In contrast to the focus group method, where a small group discusses the topics that the interviewer raises, an inquiry group becomes more actively involved in the process of research inquiry (Reason 1988, Bray et al 2001). A total of 14 users from HE/FE participated in three inquiry groups in Glasgow, Manchester and London representing a range of subject areas and type of user (teaching staff, researchers, developers, support staff, collection developers). The Glasgow inquiry group had a representative from SCRAN. His experience of using still image portals ensured a comparative basis for the study. A representative from EDINA also attended to the London inquiry providing the perspective of the resource collections developer and provider. Steve Richardson from The University of Manchester, also participated in each of the inquiry groups bringing in his expertise from the JISC/DNER Results project to provide participants with an up to date review of portal design and use, and to assist on the running of the inquiry group.

During the 3 ½ hours inquiry group session, participants were asked to reflect on and share their current and different experiences of using, accessing and developing time-based media (including still images) resources. Participants were encouraged to identify the questions and issues to establish a collective view on user requirements that they felt represented the user community. The session took into account individual experience, real scenarios and work context. Using a rich picture technique, participants were asked to represent their experience of using, accessing, developing time-based media through an illustration or drawing, using colours, bubbles, arrows, diagrams or anything that could help with their representation. Participants took turns in describing their representation enabling the articulation and sharing of experiences. The participants were then asked to identify the positive and negative experiences based on their own representations and those of others; these were captured on a flip chart.

In order to identify collectively the requirements and issues for a possible portal specification, participants then worked in groups suggesting ideas on how they would improve the negative experiences and enhance the positive ones through the use of a portal for moving pictures and sound. Finally the participants were asked to vote individually for the six most important issues that they thought should be prioritised and addressed when developing the portal. The main priorities identified are outlined in Section 5.2.1.

4.3 Telephone survey

The aim of the telephone survey was to identify reasons and barriers preventing the use of time-based media resources by non current users, and what requirements they might have for using such materials. A survey questionnaire of five closed questions with multiple choice answers, was designed to be completed by the respondents over the telephone in approximately 10 minutes. 60 individuals (30 from HE and 30 from FE), were selected randomly based on strategies devised for the National Committee of Enquiry into Higher Education in 1997 and the telephone survey conducted for the JISC/CALT Networked Learning in Higher

Education project. As well as representing individuals from HE and FE, the sample included a wide range of academic groupings as follows:

Education, Humanities Law and Languages, Creative Arts, Multi-Disciplinary, Medicine, Dentistry, Health, Mathematics, Computing, Sciences, Engineering, Tech/architecture, Social Science Studies, Leisure, Tourism and Hospitality.

Starting from the different academic groupings a range of departments and individuals were selected randomly. These individuals were chosen to represent different academic positions (professor, senior lecturer, lecturer, reader, researcher, support, course leader, head of school) a variety of geographical location over the UK and gender.

4.4 Workshop

A one-day workshop '**Getting the Picture: accessing and using moving images and sound for HE and FE**' was organised jointly with ALT (Association for Learning Technology) and took place on 27th June, at Glasgow Caledonian University. The workshop was attended by a total of 31 delegates plus 5 speakers. The workshop provided a platform to disseminate the user requirements study and the findings from the interviews and inquiry groups (current users) and the telephone survey (potential users). One of the key outcomes of the workshop was to generate discussion around using and developing time-based media, and exploring the implications and issues for a time-based media portal. To attract a wider audience, the workshop also included presentations on the learning and teaching value of time-based media, portal development, new initiatives and current thinking by JISC in the area and case studies with evaluations from current practitioners and developers. The workshop included presentations in the morning by Jeremy Atkinson (University of Glamorgan), Chris Awre (JISC), Valerie Cooper (Robert Gordon University), Stevie Barret (RSAMD) and Mireia Asensio (Lancaster University).

The 'knowledge spaces' session was a 'cascade' brainstorming and discussion activity around the workshop themes, including the theme on the relationship a time-based media portal might have with a portal for still images. This session involved the speakers and Sandy Buchanan (SRAN) and Clive Young (Glasgow Caledonian University), who acted as facilitators working with small groups of delegates (5 to 6 people). The workshop attracted a variety of perspectives and experiences which provided a very valuable opportunity for the participants to network and share practice with the wider community.

The notes from the 'knowledge spaces' in **Appendix 2** provide useful points around enhancing access and use of time-based media, a portal design outline specification, tips for developing and using video and audio resources, tips for evaluation of the learning experience, the value of time-based media resources for learning

and teaching, and the similarities and differences that a time-based media portal might have with a portal for still images.

5. User Requirements study findings

This section maps out the findings derived from the interviews, inquiry groups, telephone survey results and workshop outcomes with the study objectives as listed in Section 2. The report also includes recommendations for each objective. As will be evident, some of the recommendations overlap between the objectives, reinforcing the outcomes of the study.

5.1 To discover who uses moving picture and sound collections and data within HE and FE and select a representative sample for analysis.

5.1.1 Access to users

Users were located through the existing Click and Go Video network, JISC mailing lists, JISC 5/99 projects, EDINA, MAAS (Managing Agent and Advisory Service), BUFVC (British University for Film and Video Council), LTSNs (Learning and Teaching Support Network), PADS (Performing Arts Data Service), RSCs (Regional Support Centre), BECTA (British Educational Communications and Technology Service), the Fast-forward 2003 conference and other appropriate individual contacts. It should be noted that great difficulty was found finding users of time-based media in both sectors (particularly FE), and there was no obvious way to contact individuals. It would appear that the user community is quite small or dispersed. Access to the users was therefore problematic as there were issues of confidentiality, particularly among advisory bodies and support networks approved to provide with direct contact details. Simply finding users was a lengthy process that involved several filters and often worked only through word of mouth.

5.1.2 About the users

There was a better response about participating in the study from users in HE and particularly from developers and support staff. Some of the users were familiar with still image collections and using images for teaching and learning. However, the majority of the users had little awareness of current time-based media collections or did not know how to access them. A few mentioned SCRAN, Lifesign, Shotlist and British Pathe. Interestingly, the few individuals who knew about existing collections seemed to have been involved in the development or testing of these resources. A common trait among the users (particularly teaching staff) was the view that video was complementary to their teaching rather than a substitute. There was almost no evidence of a community of individuals sharing practice of time-based media use and development; it was evident that users often felt isolated and often had to rely on very variable levels of local support.

5.1.3 In-house development

Very few had used existing time-based material, all the users interviewed had developed their own time-based media materials in-house. Some of the reasons for this included: *not knowing where to go to access to external resources, existing resources available were not appropriate, in house development allows more control over resources and it is more contextual*. Issues of control, self sufficiency, the local context, tradition, what is appropriate and what it is not in the type of learning they wanted to provide were often raised repeatedly during the interviews. It should be emphasised that the users interviewed were clearly highly motivated individuals with a strong sense of ownership and control over their developments. Some representative comments from the HE and FE sectors were:

'If I need an image or video, I'll make it myself' (HE)

'We use video that we filmed ourselves' (FE)

'I've been in academia for 15 years so I've got 15 years library of material. Now of course I will take stuff from the web or scanning images from journals. But I mean the great majority of what I use is stuff I've taken myself' (HE)

'There is an extent to which FE staff tend to create their own learning materials because its just how its been done and there is a certain amount of ownership of learning materials' (FE)

Issues around personalisation of the content were also raised, particularly in relation to the personal input in the editing and presentation of the material to the students.

'Because a lot of what we use in the college here is very personalised to lecturers, they've made their own selection from television and documentaries that they've edited themselves.' (FE)

'The nature of most courses taught in this country is that they are very unique to the individual. What I teach is probably different in its content and flavour and emphasis and structure to what anybody else in the country teaches.' (HE)

Issues around lack of relevance with existing resources were also mentioned. The concept of *relevance* in this case, was to do with the perceived *appropriateness* of the resource to the teaching style, specific subject or with the curriculum requirements (for FE particularly).

'It [external resource] doesn't fit the requirements of the learning, the learning environment that we want to create' (HE)

'For what I want there is not really a lot of relevant stuff available' (HE)

'Some of them just don't work for our curriculum, they may be the right subject area but the approach they take or the level they're set at just don't work for our curriculum at all' (FE)

This was linked in several occasions to issues of time needed to find appropriate resources. In some instances, users considered that it was easier to develop in-house rather than searching for resources over the web. Issues around context, capturing the surroundings that the students are familiar with were also indicators of what was meant by *relevance*.

'One of my jobs within the college is to try to help staff find these resources but that's not an easy thing to do and staff do not always have the time for that' (FE)

'Yes we've found some things [resources] that are OK that we can use a lot, but I think it is probably nice to have it filmed in a lab the students know, with faces they know on it' (HE)

It appears also that the knowledge of existing collections might not reach teaching staff: According to one support staff in FE:

'So I would say you might find that the level of people like myself in the college that there is a reasonable awareness [of resources available] but the minute you go down to the practitioners, the lecturers, the awareness drops' (FE)

Objective 1 Recommendations

- 1. Few users knew of existing time-based media collections indicating that some considerable work still needs to be done in order to increase awareness among the HE and FE communities. More advertising (brochures, fliers, etc) as well as paper guides of resource catalogues in order to reach a wider audience.**
- 2. More needs to be done with change agencies and advisory bodies to raise the profile of media collections and enlist them to initiate the process of user community building.**
- 3. It appears that the user community comprises 'early adopters', who have strong views on what they want/need. It is advisable to involve the users in the critical decisions around the portal design, but to also recognise that they may not represent the potential mainstream user community.**
- 4. Issues around appropriateness/personalisation/control of the resources are important to the users both in HE and FE, indicating that the users must be able to copy, edit and re-format future portal resources to fit with their learning design.**
- 5. In-house development should not be ignored or unsupported; there are elements of ownership, context and tradition that are important to the user. 'Blending' locally produced and portal collections may be an appropriate strategy for users.**

5.2 To find out what the requirements of these users are for a time-based media portal.

5.2.1 Reactions about the Portal

Users reactions to the portal idea were mostly positive, in particular the idea of centralising and bringing relevant resources together.

'We need to adapt what is out there and bring it in line with the community college' (FE)

'If there was a way of centralising resources that would make good sense' (HE)

'That would be ideal. You could then target students and say – go to this portal you will find it broken down into subjects headings and there might be something you could incorporate or address' (FE)

One of the users was sceptical about the proposed portal. Instead he suggested the idea of supporting and funding the user community to develop quality and up-to-date content, rather than investing in a portal to bring in existing collections. He suggested a model based on Shotlist, a VHS resource for HE, which allows copying, re-editing and re-formatting video resources according to the users own needs. Another FE user, though mostly optimistic about the portal initiative, was unsure on how useful it would be to FE needs.

'I'm a bit critical of the portal idea, you put in a huge amount of effort into running a portal and that is money that we should be putting into getting new up-to-date content development. You need to build on the community...You pay the community and the community will jointly develop new materials which everybody can use.' (HE)

'What we have found in the past is that systems that tend to be developed have been primarily developed in line with HE needs' (FE)

This scepticism seemed to be linked to how and who would be in charge of content development. This was indeed the main concern expressed by the users. There were also mixed feelings about sharing in-house resources. There was a clear underlying tension between the concept of sharing and feelings of ownership (individual and institutional) of the resources, as indicated by the quotes below:

'Could I share my video lectures? Um, I could live with that in a generous spirit' (HE)

'Sharing resources would make my job a lot easier' (HE)

'My videos are my unique selling point; I would be reluctant to share them. They are my intellectual capital' (HE)

'I suppose the only thing that might motivate me would be some sort of payment that might be possible. Well if there is no payment I can't actually see what's the point of giving my materials to a competitor, that's really what you are asking for' (HE)

In one occasion, a user implied that resources *per se* do not make educational sense, is what the educator does with these resources, how they are being used that adds pedagogical value to content material.

'I think making things increases my profile and I don't like the idea that we should be competitive with one another. It's what you do with the resources, how you present it, what goes with it. [Resources] on their own don't make any sense, they still need me' (HE)

Other issues included generic versus specialised portal (e.g. *how relevant is it going to be for my subject area?*) and curriculum differences between FE and HE as well as between Scottish and English FE curriculum frameworks. The importance of ensuring high quality material was also a raised concern shared particularly by FE users.

'I would say there is a departmental approach to materials because there are internal application procedures for verifying the quality for materials, there are team meetings, etc. and then there is an external auditing of materials. Where I see in HE, there is probably less developed structure for ensuring that kind of consistency of materials' (FE)

5.2.1 Users' educational and technical requirements

The participants in the inquiry groups were asked to identify key requirements for a possible outline specification. In order to prioritise over the lengthy list of requirements, participants were asked to vote for the six most important/relevant ones. The list of bullet points below show the most voted requirements among the three inquiry groups.

Educational Requirements

- *Materials must be meaningful for education.* This was a very common comment, which indicates the need to contextualise resources within an educational framework that is relevant to the subject discipline and the students. It also means the importance of providing resources that are of easy access to the user and can be easily delivered to the students whether they are off or on campus.
- *Up-to-date material.* The development of a portal is a long term commitment and there must be sufficient resources to ensure that there is a flow of new material into the portal.

- *Quality control.* It was not clear exactly what level of quality control is required. This seemed to mean different things to the HE and FE sector, but some form of peer review, was suggested by many participants.

Technical Requirements

- *Easy to use and download.* People's experience of Google has raised expectations of ease of use.
- *User orientated.* Some degree of personalisation or user profiling in order to save time or narrow the inquiry seemed to be envisaged. Users liked to gather their own links and resources.
- *Easy searching and browsing based on metadata or standard descriptions.* There seemed to be a low understanding of what metadata meant, but some form of library style classification was suggested.
- *Quick and efficient, create resources as brief and segmented as possible.* It is difficult to 'scan' (i.e. review quickly) time-based media.
- *Copyright cleared materials.* This might be a significant selling point of a portal as current users are clearly worried about using not copyright resources.
- *Intelligent searching.* Some participants wished to have some sort of subject organisation/structure to the portal content.
- *Ability to download resources for local use e.g. for distribution on CDs.* This seemed to be one of the most common ways of delivering resources, thus multiple formatting and ease of downloading were suggested.
- *FAQs, including support for systems and hardware.* The majority of the participants clearly agreed that the portal should be targeted to non technical users.

The workshop also identified some critical elements concerning a design specification for a time-based media portal (see workshop 'knowledge spaces' **Appendix 2**).

Objective 2 Recommendations

1. **It is evident that the HE and FE communities have different curriculum requirements. In order to cater for both during the pilot exercise, it is important to identify common and appropriate subject material.**
2. **Resource sharing appears to be generally an attractive idea; however issues around intellectual capital of both the individual and the institution must be addressed. Initiatives and support to enable resource sharing should be targeted to the institutional level.**

3. **It is essential that content is educationally meaningful to the users (including the students). This does not only imply subject relevance, but also providing content that can be used and re-used for different pedagogic approaches, a range of course and programme designs, and type of students that might be studying on campus or at a distance.**
4. **A strategy to manage the up-dating and quality of resources should be devised to guarantee the flow of new and quality material. This could involve some form of expert input and feedback on content renewal and, as suggested by the users, some form of peer review.**
5. **A clear priority requirement is the design of a user-orientated portal, aimed at the non-technical user, with accessible material that is easy to browse and download. See Technical Recommendations by Steve Richardson concerning portal technical design.**

5.3 To discover what developments would enhance the use of such materials beyond their current requirements.

During the inquiry groups, the users were asked to identify what would enhance the use and access of the portal. Ideas around involvement of the users, consultation with the user community and user driven activities were clearly emphasised by the participants. The developments that would enhance the use of such materials are outlined below:

1. *Ensure community involvement in development.* For example by building an early portal prototype to generate user feedback.
2. *Provide opportunities for networking with other users.* This was regarded as very significant as many of the teaching staff involved in the study usually felt quite isolated in their video/audio work.
3. *Manage expectations of users.* This was mentioned in relation to the portal limitations and the importance to state these limitations from the outset.
4. *Peer review system.* The FE users in particular raised the importance of quality of resource material, and peer review and/or public review systems were also suggested. This was broadly supported in order to ensure quality control of the resources and thus to enhance the use of such materials.
5. *Use of exemplars and templates, case studies and evaluation.* There is a perceived need to share good practice and see examples of media relevant to a range of subject areas, and where possible the case studies should be evaluated.
6. *Have an agreed cataloguing system.* This was linked to the idea of user consultation of the cataloguing system.
7. *High levels of interactivity between users and portal managers.* This would involve making the resources evolving, dynamic and responsive, where users could add links and resources.

Objective 3 Recommendations

1. Users have a wish to work together, to collaborate and to be consulted. It is important to ensure that this is part of the overall portal design, where people can have a say through the process of portal and content development. A participatory based approach (resources developed, chosen, evaluated and tested by the community) could be considered.
2. Users have expectations of time-based media portal, not only as a source of material, but as a focus to share good practice, providing examples of excellence with tools and templates.
3. Supporting the development of case studies, publishing educational guides, undertaking evaluation reports and creating examples of learning activities, is the path to raise the profile of time-based media in education.

5.4 To assess how users discover, locate and use such data at this time to inform the enhancement of such processes through a portal.

In only a few occasions users reported to visit a particular portals or websites to locate resources. It appears that if resources are found this is somehow at random, which highlights the need to centralise resources. If users want to look for a particular time-based media material, the first strategy for discovery and location of such materials is mostly to use the Google search engine. However some participants commented that they felt uncomfortable about using some of those resources due to unclear copyright, or giving the links to the students where there might not be long term permanence.

'The trouble with video and sound clips is that often you go to a web site one day and they are there, and you go back a week later when you are meant to teaching and they are gone' (FE)

A majority of the users keep a personal file in their PCs and/or a Web Favourites folder as archives for still images and video clips that have found on the web so they can retrieve and use for future use. This is positive as it indicates that they are receptive and ready for the idea of archiving resources.

Users have distributed time-based resources via a CD, embedded them into computer assisted packages and made them available through the departmental Intranet. The main preference for distribution of time-based media resources is still through CDs with VLEs or similar used to a lesser extent. There are strong arguments for using CDs as a tool for distribution. Some of the reasons indicated by the users were:

'It is tangible...something that the students can take away with them' (HE)

'You get better quality of video on a CD' (HE)

'The reason we went to the CD route was we had been led to believe that, actually making them available over the internet via video streaming was difficult to coordinate within the university. We had

an urgent time scale.....we had to do it with these students, and we took the decision we'll do it by CD because that's in our control we can do it ourselves' (HE)

'So what we did we searched the SCRAN data base for appropriate documentary clips, we wrote pages imbedded the video clips in the web pages and we altered that to a CD. We don't have the streaming and video technology in the college to deliver that kind of resource in any other way' (FE)

Objective 4 Recommendations

- 1. Make sure resources are as 'permanent' (i.e. links that do not change) as possible.**
- 2. The portal should allow for customisation, multiple formatting and creation of personal files of time-based media resources as teaching staff are already used to create their mini collections.**
- 3. It is necessary to accommodate a range of methods of local distribution (e.g. through a CD and VLEs).**

5.5 To consider how access to time-based media could be enhanced within learning, teaching and research.

The users interviewed claimed that they did not use existing collections because they did not know how to access them and were unsure if they would be relevant to their subject. It appears that finding resources is not easy and very few knew about existing collections and support services, or did not know how to use them exactly. In many occasions the users said that the videos available were often taken with a different perspective.

'I did quite an extensive search of the web to see if there was anything the same as what I was doing. And that although there are a lot of video clips on the web, anatomical movements are not done in quite the same way as I do' (HE)

'It would be really useful to know and get a better idea of what is there already in terms of video and how they are being used' (HE)

'Moving images are all over the place at the moment you know, there are archives but you can not get access to them because they are in universities, libraries or sometimes they are commercial organisations' (FE)

As indicated earlier, most of the users felt that materials must be educationally sound – i.e. designed for education, if they have any chance of being widely used by the mainstream community. Several users suggested that guidance on how to use time-based media resources/collections with their students, as well as access to examples of good practice would be helpful and would increase the use.

Lack of local support and infrastructure issues was perceived as a barrier preventing access and particularly the development of time-based media. It was pointed out that support staff should be able to have the necessary skills and knowledge to support teaching staff in the development and use of time-based media.

'The reality is that most academics do not have the time to do that [develop time-based media resources] nor should they. It would be completely inappropriate use of university resources to have academics individually learning and spending a lot of time on these things' (HE)

'Ideally I would like support to be such that the only input that I have to have is the academic input not the technical input. Ideally I shouldn't have to worry myself about the video camera, about the conversion into digital format, about integrating it into using something like Microsoft Producer....So that I can turn up and say – right I want to create a video presentation come along and tell me what you need for this to happen in terms of academic content' (HE)

'I'm quite lucky in having a good multi media department and quite a technologically advanced multi media department' (HE)

'There are a number of people who would really like to push the technology side of things but then that needs freeing up with the infrastructure...there is no way the college can give me any space on the server to store video materials' (FE)

"Well it's not really the access to the material its more the access of the kind of hardware that the institutions do not have' (FE)

Two users mentioned involving the students to assist in the development of time based-media resources, and one pointed out the added learning benefit to the student.

'We actually employed a student and we said 'go away and learn how to use Microsoft Producer', but only because we had got some money that enabled us to employ somebody to do it'. (HE)

'We have one of our lecturers whose making a video about building a computer at the moment, building all the components. He is making the video as he goes along with his students. So the students are part of the video and see it all taking place' (FE)

The workshop also identified some further issues:

- *The need to integrate portals in institutional web spaces.* This is interesting because institutional portal was the preferred choice for delivery for the HE users (as shown in **Figure 5.4**) however the FE user community chose a subject based portal option instead.
- *We should embrace Google.* Rather than view it as an enemy, we should utilise metadata effectively to ensure the portal is retrieved via Google.

- *Access from home.* Many of the participants agreed that the portal should be available for users working from home and for distance students.

Objective 5 Recommendations

1. **The new portal should be part of a wider process of raising awareness and use of time-based media and providing appropriate training and support for technical and support staff.**
2. **Students should be involved in portal and content development. This would bring in the students' perspective and requirements when making design decisions. In addition being involved in the process of creation of resources could bring in new learning opportunities for the students.**
3. **To avoid the proliferation of portals, it might be useful considering methods of integrating the portal into institutional web spaces and VLEs. However this might not be as appropriate for the FE sector as Figure 5.4 indicates.**
4. **It will be useful to be able to access the portal from popular search engines such as Google.**

5.6 To consider those users who do not currently use time-based media in their work/study and to report on what requirements they might have for use of such materials, and what barriers there are preventing their use.

The data to inform this objective was obtained from the telephone survey conducted with non-time-based media users and described in section 4.3. A total of 60 individuals (30 from HE and 30 from FE) ranging from different academic groupings, geographical location and gender took part in this part of the study. The following figures show the results from the telephone survey questionnaire (**Appendix 3**) targeted to non user of time based media. The aim of the survey was to identify reasons preventing the use of such resources and what they requirements might be.

5.6.1 Barriers for potential users

The first question aimed at gathering background information on the number of technologies that they currently use for teaching, research and support activities. The respondents were asked to choose from the following list the technologies that they currently use for teaching, research and support staff activities: text-based conferencing, VLE (such as blackboard, WebCT, Lotus Notes, etc.), Videoconference, VHS tapes, general computer software, web pages, PowerPoint, e-mail.

The results (**Figure 5.1**) show that the most frequently used technology on the list by both sectors is email and the least used is text conferencing. It appears however that the FE sector consistently seems to make more use of the technologies than the HE respondents. In particular videoconferencing appears to be proportionally more widely used by the FE respondents.

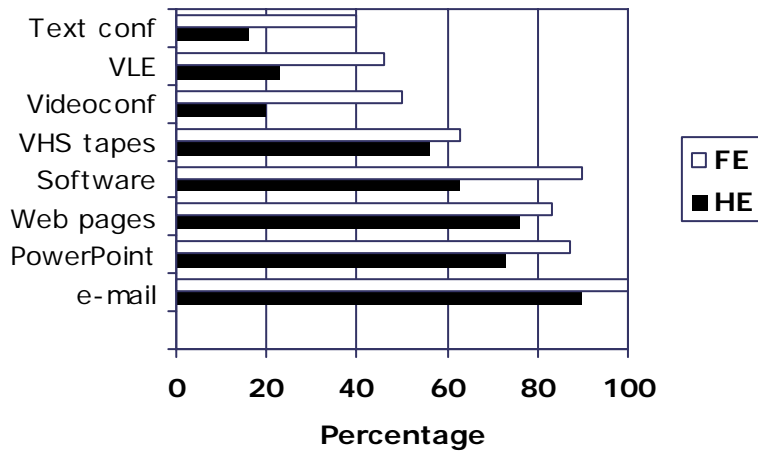


Figure 5.1

The next question explored reasons that may prevent use of time-based media resources. **Figure 5.2** shows that the need for more training and guidance seemed to be the principle barrier for both sectors. The second most important barrier for FE was lack of funding, whereas in HE it was a lack of clarity on how to use these type of resources. For both sectors technical difficulties were also seen as obstacles. Only around 12% of respondents found these resources not appropriate (N/A) for their subject. Note copyright was not an issue for this group.

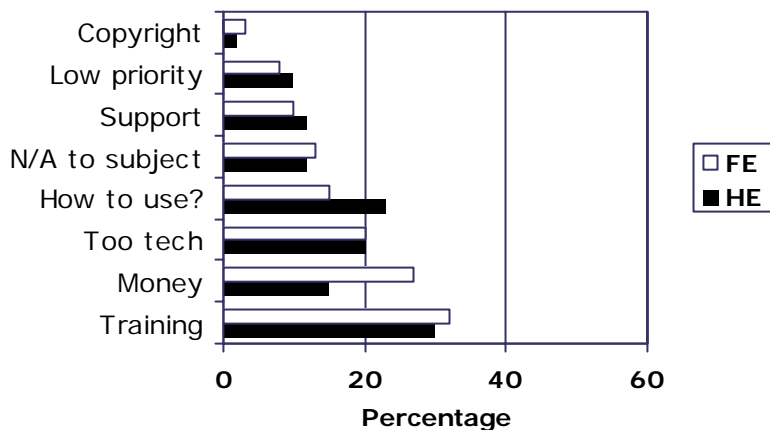


Figure 5.2

5.6.2 Potential for time-based media

The non users were asked what the value of using time-based media would be within their subject area. They were asked to choose from the following options: It can bring real life into the classroom (i.e like a traditional video), it can provide a more interactive teaching environment (students can access to resources any time and remotely), it can be integrated with other web resources (such as VLEs), or there is no value.

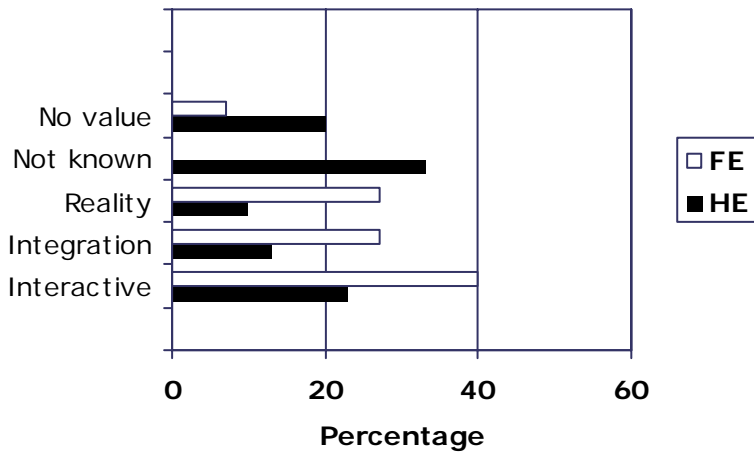


Figure 5.3

Remarkably, a third of HE respondents did not seem to know how to answer to this question while all FE respondents had an opinion. Interactivity seemed to be the chosen one among the FE community. 20% of the HE respondents also thought it had no value to their teaching.

The final questions aimed at exploring the potential ways of using time-based media resources. The respondents were asked to chose their preferred way to access to resources from the following options: not interested in using them, Resource Sharing Network (sharing, uploading, downloading facilities), develop own resources, CD-Rom Catalogue, General Portal (via the web, flexible cross-searching), Institutional portal (via the web, quick access embedded within institutions), Subject based portal (via the web, search by academic discipline).The results in **Figure 5.4** show that a Subject portal seems to be the first choice by the FE group whereas the HE sector opted for an Institutional approach to portal.

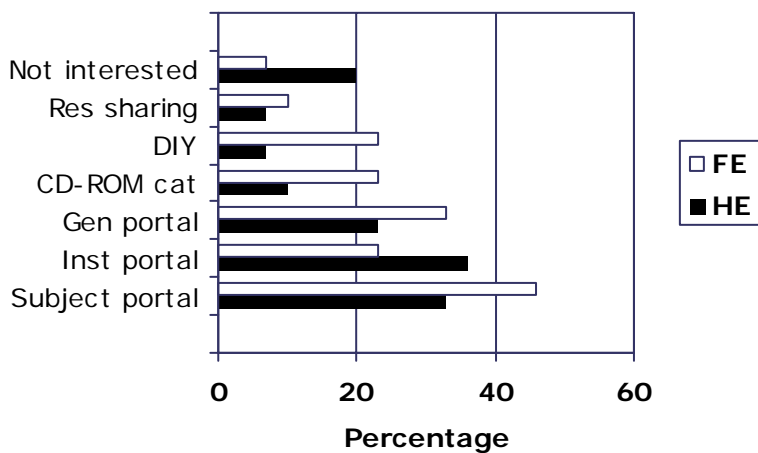


Figure 5.4

A significant finding is that 20% of the HE respondents expressed no interest in access to time-based media resources comparing to only 7% among the FE community. Overall the FE sector selected more options than the HE sector. As the results from **Figure 5.1** have shown, the FE community uses far more technologies in their teaching, research and support activities than the HE sector, and as **Figure 5.4** highlights, they are more positive about developing their own resources. **Figure 5.3** has also indicated that many HE respondents generally felt that time-based media had no value to their teaching. These results might indicate that the FE community are perhaps more receptive to the educational value of video/audio and therefore they are potentially more likely to become mainstream users of collections and portals. However it is significant to point out that training and guidance are equal barriers in both sectors as shown in **Figure 5.2**, and that this is a clear requirement expressed by the non users.

Objective 6 Recommendations

- 1. It is clear that training and guidance are essential in order to encourage and support the effective and widespread use of moving image and sound collections in both sectors of HE and FE.**
- 2. It appears that the FE community might be more receptive to the idea of using and accessing time-based media resources via the future portal. Therefore it is critical that they are fully involved in the consultation and development process, and that their specific needs are taken into account.**

5.7 To investigate what relationship a time-based media portal might usefully have with a portal for still images.

Users were more aware of current services and portals providing still images and have used them in their teaching and development projects (e.g. Life Science, Bio-Med, and SCRAN). The workshop identified some possible similarities and differences that a time-based media portal might have with a portal for still images. The general feeling from the participants in the workshop was that there were more similarities than differences when thinking about a time-based media portal compared to a still image portal. It was felt that users are more interested in finding good quality, relevant resources, across multiple formats rather than searching on a format specific portal. Specifically, users felt that, whilst finding the appropriate resources was important, what would make a portal most useful was the availability of tools to use once the required resources had been found. The main differences noted were that the metadata and the rights management would be more complex, and the tools for manipulating this form of media would need to be more sophisticated. It was felt, however, that these differences could probably be accommodated in the technology of a portal, especially one which allowed a filtered search on media type.

Objective 7 Recommendations

- 1. Ensure cross-searching between still and time-based collections**
- 2. Consider making manipulation tools available via the portal**

Technical Recommendations by Steve Richardson

The following details core technical recommendations for a Moving Pictures and Sound Portal. It is recommended that the portal takes the form of a resource discovery tool i.e. the portal is searching extensive and standards compliant records of remotely hosted resources. The technical implications of storing and delivering multi-media content in every available format are extremely demanding, intensive and largely inappropriate, consequently no attempt is made to address the issues arising from any attempt to implement a resource data store. In this sense much could be learned from other 'metadata only' portals, for example RESULTS and Pixus.

One of the key outcomes of the study is that users hold different perspectives and utilise differing vocabularies to identify, store and locate resources. Various, formally defined vocabularies provide taxonomic views of resources and resource collections in Learning and Teaching yet consensus is rarely achieved due to the dynamic and rapidly evolving nature of the subject area. In order to address this it is recommended that a multi-faceted subject structure be adopted. For example RESULTS aimed to provide many views of the same set of resources by allowing any user to restructure the resource model to reflect their practice, including the ability to search without structure. This includes the facility for users to develop their own personal collections of resources. Other clear outcomes reiterate common themes of community, resource sharing and discovery, interdisciplinary and cross culture harmonisation of resource quality and availability. The JISC Information Environment provides the perfect platform on which this may be achieved; the following table outlines the standards in use which should be adopted:

Protocol	Purpose	Reference
Z39.50	Currently Z39.50 is the technical solution to cross database searching and can provide powerful localized cross field relational database searching capabilities	http://www.loc.gov/z3950/agency/ an excellent tool that provides a Z interface to relational databases is zSQLgate http://sql.z3950.org/
RSS	Syndication of News and Alerts for example list(s) of new resources and service announcements	http://purl.org/rss/
OAI-PMH	Transport protocol for metadata – used to harvest metadata records	http://www.openarchives.org/
Open-URL	Methods by which users may be led to appropriate resources	http://www.sfxit.com/openurl/
Persistent URI's	Make URL's consistent.	http://purl.org/ http://www.doi.org/

See <http://www.ukoln.ac.uk/distributed-systems/jisc-ie/arch/> and <http://www.ariadne.ac.uk/issue33/info-environment/> for further details

In particular the JISC IE recommendation to use persistent URI's adopting either DOI or PURL technologies addresses users concerns about the persistent availability of a resource.

In providing such extensive and unparalleled access to resources particular care should be taken to maintain copyright and use restriction metadata for resources with clear indicators of ownership and intellectual property rights. Aside from the actual data storage this is largely a user interface design issue.

It will be a legal requirement for the portal to address accessibility issues. All new developments must conform to the requirements laid out in the SENDA act see <http://www.techdis.ac.uk/> and http://www.jisc.ac.uk/index.cfm?name=pub_smbp_disability . The recommended standards to achieve SENDA compliance are XHTML 1.0 <http://www.w3.org/TR/2000/REC-xhtml1-2000126/> and CSS level 2 <http://www.w3.org/TR/REC-CSS2/> and be validated against something such as Bobby <http://bobby.watchfire.com/bobby/html/en/index.jsp> to level AA compliance paying attention to both automated and manual checks. In producing an accessible website care should be taken to make the web site usable; care and attention to detail will pay dividends in flexibility, extensibility and general usability.

With regards to the quality of metadata and quality of content a peer review system could be implemented – the model that Amazon utilize is effective and provides opportunity for professional and 'lay person' reviews. It is recognized that this is out of the control of the portal to some degree, though the portal could help raise quality standards by providing good user interface and clear guidelines on how to complete metadata fields and a similar review process could be applied to the metadata.

Finally, many references are made to working with the Google internet search engine. One of the primary parameters on which Google rates pages is through their PageRank technology which in simple terms attributes a higher PageRank to pages that are linked to by other external pages that themselves maintain a high PageRank. This is interesting because it also feeds very well into the 'raising awareness' issues; in short by soliciting the support of popular web sites (Academic Institutions, JISC, Established Projects etc...) the awareness should increase hand in hand with the PageRank on Google. Be careful though because a page with a low PageRank linking to the portal will actually reduce the PageRank value. For further information a good article may be found at <http://www.webworkshop.net/pagerank.html>

Steve Richardson, School of Nursing Midwifery and Health, University of Manchester

Summary of Recommendations and Conclusions

The increasing development of moving images and sound resources through digital libraries and collections, as well as in-house productions, promises an exciting opportunity to integrate time-based media into mainstream e-learning. It is however essential to understand (through further research and evaluation) the users' experiences and requirements, and continue to explore the issues and barriers which may prevent mainstream use. The user requirement study has involved a total of 119 participants contributing to the interviews, inquiry groups, telephone survey and workshop. Reactions about the proposed portal idea were on the whole positive and users generally agreed that there is a need to centralise and gather resources together for easy access and use. Though there appears to be a real need to provide this kind of service, it is clear that time-based media are not yet integrated into mainstream elearning. As one user remarked:

'Time based media are used by a few people a lot and not at all by many people'

The study has shown that there is as yet no obvious community of digital time-based media users. The users who took part in this study appear to be early adopters and developers of these type of resources. Few users knew of existing time-based media collections, indicating that some considerable work needs to be done in order to increase awareness among the HE and FE communities. It is recommended to involve advisory bodies and support agencies to increase the access and profile of existing collections. More publicity targeted to the mainstream user, including CDs of sample materials with real case studies, printed catalogues and so on would contribute to enhancing awareness of and levels of access to current collections.

In-house development by the early adopters is a reality and should not be ignored or be left unsupported. Joining forces with the early adopters to inform and/or contribute to the portal content development is recommended. However it should be noted that though they are a significant group, early adopters might not represent the mainstream users who are likely to have different perspectives and requirements. The role of institutionally based support staff is also critical, and any portal initiative has to connect with this group at all stages.

There are very few initiatives to promote the sharing of practice and networking, and therefore there is a critical need to invest in community development and growth. There appears to be some sense of community among technical and support staff, but the teaching staff user community is dispersed and there is therefore insufficient sharing of pedagogic research and evaluation. It is important to bring both practitioners and support staff together. The portal should not be a closed transaction between the portal itself and the teaching staff. The establishment of a 'learning community' of users may be seen as an essential preparation for a significant uptake. This could be encouraged through workshops, strands at conferences, training provision and research and development projects.

Though it is important to continue supporting the development of time-based media collections and to make them more accessible and useful to the community through a portal, delivery alone is not sufficient to have an impact on successful use and up take of moving images and sound. As one user put it:

'We have a culture of willingness but we still need to engender a culture of usefulness'.

It is critical to *'engender a culture of usefulness'* and this can be achieved through: staff development, mentoring and guidance to achieve critical mass of users. This requires support on technical development and innovation as well as further pedagogical investigation. Common questions such as *How useful is time-based media to improve my teaching?* and *how useful is it to enhance the student learning experience?* i.e questions specifically focused on educational uses, need to be further analysed and disseminated. Providing funding to enable the use of collections, through training workshops, development of cases studies, pedagogic and technical models and evaluation of the learning experience, should be part of the strategy to promote mainstream use of existing collections and the future portal.

An institutional-level approach to time-based media integration into VLEs and mainstream elearning is also suggested for HE. However, this might not be as appropriate in the FE sector. Assessing what might be the most effective delivery approach could be achieved through longitudinal studies to investigate the impact across the different stakeholders in one single or a small group of representative institutions. It is essential to involve the user community, where people can have a say through the process of portal design, particularly content development. A participatory based approach could be envisaged where focus groups of users, potential users, support and management staff, as well as the students themselves can be engaged in the design and development decisions of the portal. It is also recommended to consider resource sharing mechanisms within the portal, where in-house material could be shared, recycled and blended with other resources. However this clearly raises issues of ownership and intellectual capital for the individual and the institution, therefore this should be addressed possibly through funding opportunities.

From the telephone survey results, it appears that the FE community might be somewhat more receptive to the idea of using time-based media resources and the future portal. Therefore it is important that FE is fully involved and that their specific needs are taken into account. This study has highlighted the difficulties in finding FE time-based media users. It is advisable to ensure that any initiative to promote the portal access and use through advisory and support bodies also makes sure that it reaches the FE networks.

One of the users interviewed pointed out that in order to encourage the students to use time-based media for learning he had to convince himself of its truly educational value. This thought encapsulates the conclusion that the pedagogical strength of time-based media is still largely unrealised. We need to create *'a culture of usefulness'* where users can perceive moving images and sounds collections and resources as powerful,

innovative and creative tools that will enlighten the teaching and learning experience. It is through working with the users (both teaching and technical staff) that we might bridge the gap between the proliferation of rich resources and their educational 'usefulness', as understood by the potential user community. It is important to understand the issues that will hinder the use of and access to time-based media, and these should not be seen as a barrier but rather, an opportunity for discovery and research.

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JISC/DNER Click and Go Video [www.clickandgovideo.ac.uk]

JISC/DNER Results [www.results.ac.uk]

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Appendix 1

Key common questions asked during the face to face interviews with users.

1. How do you currently use moving images and sound?
2. What collections, Portals, services and networks are you aware of in the area of time-based media?
3. What strategies do you use to discover and locate distributed resources?
4. How do you integrate moving images and sound resources into your teaching practice?
5. From your experience, how do you think access to time-based media could be enhanced within learning, teaching and research?
6. In your opinion, what developments would enhance the use of such materials?

Appendix 2

Notes from the Knowledge Spaces, 'Getting the picture: accessing and using moving images and sound for HE and FE', Glasgow Caledonian University, 27th June 2003.

The Knowledge Spaces technique was created by Mireia Asensio and Clive Young and was first implemented at a JISC Click and Go Video project workshop. This is a 'cascade' brainstorming and discussion activity around the workshop themes. The session involves facilitators working with small groups of delegates (4 to 5 people) and takes about 1 hour 15 minutes in total. One person leads the session and does the time keeping.

The purpose of this activity is for all participants to have a chance to collectively share and discuss their views around the workshop themes, in an informal and fun way. Each facilitator has a workshop topic and an allocated table (a 'knowledge space'). The delegates are asked to join a 'knowledge space' of their choice, and they move to a new knowledge space every 15 minutes (i.e. each delegate might be able to participate in 5 knowledge spaces and work with different delegates and facilitators). While the delegates are in each knowledge space, they are able to brainstorm with the group and write their ideas/ suggestions/issues in a flip chart. The facilitator ensures that this process takes place within the time allocated.

As the session progresses and people move from one knowledge space to another, the list of contributions at each one grows. As a new group comes to a knowledge space, the facilitator reviews briefly the existing contributions and asks the group to reflect on these and spark off ideas for new contributions (hence the hope of cascading ideas through the group). The role of the facilitator on this process is to promote generation of ideas, encourage dialogue and convey a sense of knowledge construction.

After a short break, each facilitator has few minutes to summarise the participants' contributions around the theme, and of course add their own perspective.

List of facilitated topics

1. What can be done to promote the use of and enhance access to moving images and sound resources via portals?

Facilitated by Jeremy Atkinson (Head of Moving Pictures and Sound Working Group, University of Glamorgan)

- Too many portals - have fewer portals with more menu options. Possible need for a 'superportal'.

- Users confused by the proliferation of portals. Need to integrate portals, including moving pictures and sound portal, in institutional web spaces. Need to get to institutional web managers to make this happen.
- Embrace Google rather than view it as an enemy. Utilise metadata effectively to ensure the portal is retrieved via Google.
- Build user confidence in the portal by emphasising standardisation, quality, sustainability of content, up to date content.
- Make the portal as simple as possible to use for academic staff.
- Recognise that this could conflict with JISC standards.
- Need for moving picture and sound 'champions' in institutions. JISC could part fund the initiative!
- Need for case studies and models of best practice, with tools and templates.
- Make a prototype moving picture and sound portal available as soon as possible for people to comment on.
- Consider having a major exercise (funded by JISC) to market the portal and moving picture and sound content. Consider funding pilot projects with appropriate courses in institutions.
- Use Open URLs to manage resources and to lead users to appropriate resources.
- Emphasise that the portal is a portal for moving images by utilising images in its design.

2. Portal design: how would you like your new video and audio portal to work?

Facilitated by Chris Awre (JISC)

- Bulletin forum board – linked to resources
- Personalisation needed, though possible problem with getting data from individuals. Possible use of Amazon model
- Good model: Palatine (LTSN)
- Desire for some sort of subject organisation/structure, though it is recognised that this has its limits. Also the ability to search without structure.
- Multi thesaurus approach. Proactive classification based on use: adding keywords or offering possible selections to users; index by audience level
- Tutor-led, mini collections/searches, hidden behind a button/link. Link to VLEs
- Any portal must include commercial links and information
- Quality metadata (& quality of content) is key, as is item level description. It is recognised that the former is out of the control of the portal to some degree, though the portal could help raise quality standards
- As few clicks to resources as possible
- Provenance clearly displayed.

- Context is important, that is where the resource came from, what it was created for etc.
- Voice recognition for searching
- HCI design incorporated
- The ability to print metadata for reference
- Accessibility issues will need addressing
- Adaptations of information about accessibility would be useful
- Clear copyright info must be given
- User needs assessment (for use) must take place
- Different views onto the portal, maybe dependent on role
- Search on waveforms or image characteristics
- Leads to analysis and functional tools (if portal doesn't have them)

3. What are our top tips for developing and using video and audio resources?

Facilitated by Stevie Barrett (RSMD)

- Enthusiasm (regard and recognition) incentive
- De-mystification
- Purpose (and re-purpose!) existing materials. Doing something you can't do another way
- Targeted
- Commitment of users to integrate it – embedded into assessment
- Needs good examples and case studies
- Training
- Institutional support (management level)
- Making things as accessible as possible
- Need critical mass of content to get it used
- Promote cultural change
- Collaborate/share resources
- Broaden the base of disciplines
- Disseminate the benefits/ market
- More workshops like this to share – possibly filmed and made available as a 'top tip' resource
- Get a good team
- Have a solid plan and build on user evaluation (needs analysis)
- Create resources as brief and segmented as possible – easily updated
- Keep resources current/applicable
- Provide useful and appropriate extra tools for A/V manipulation

- Use hyperlinking where possible to link to other resources
- Stop trying to cater for everyone – treat standards with critical scepticism. Be part of creating tools standards
- Have a copyright clearing agent
- Developers should learn using video/audio resources so they can empathise

4. Accessing resources via a still image portal and a time-based media portal: what is different and what can be the same?

Facilitated by Sandy Buchanan (SCRAN)

What can be the same?

- Subscribe/ free, central service?
- User comfort in interface
- Thumbnails
- Hybrid collections
- Select by format
- Integrated metadata standards
- Transparency in technology to use
- Why distinguish between them?

Differences:

- Differences are in tools
- Formats?
- Plugins required
- Indicate download time/ home user
- Rights management more complicated for TBM
- Video with captioning meta searchable?
- More complex tools
- Standards more complex
- Manipulation tools e.g cropping
- More personalisation
- Linking communities
- Sharing use/experience
- Content packaging

- Search interface format, searching to distinguish
- Finding the best resources
- Neutral Portal

5. How can we tell if video and audio resources work with students?

Facilitated by Valerie Cooper (Robert Gordon University)

- Can we discover what we are evaluating? – Is it the video/sound or the way it is used. Different lecturers will use it in different ways.
- When perceived benefit matches actual benefit then results are more positive.
- Comparison of an online video to 2 hour lecture, measure is unfair.
- (Accessing resources via a still image portal and a time-based media portal: what is different and what can be the same?), I don't think this bit came from us?
- Module/course evaluations not rigorous enough to stand alone as evaluation tools but should probably be used to triangulate results.
- Are we here to make students happy? Perceived values should relate to learning rather than emotion.
- Measure evaluations over a period of time – variables change in terms of updating of computer systems etc and students thoughts change with familiarity with the media.
- How do you take into account learning styles? Do you even need to as these type of resources provide variety for different learning styles – but are we in danger of overload?
- It may not be necessary to prove that one method of learning is better than the other but just is it as good?
- Need to look at all the issues: cost effectiveness, accessibility, time, variety of resources and how they are used.
- Does this resource re-dress the balance of large lectures by providing self study tutorials?
- Is it providing something they wouldn't otherwise have in terms of resources and learning experience?
- Recruitment of new students could be facilitated by the provision of this type of learning tool.
- Exam comparisons need to take into account: ethics, same resources, time consuming, quality of resource, Coursework. These type of evaluations tend to be favoured by department managers for providing “proof” in a more quantitative form though should be interpreted with care and supported by qualitative evaluations.
- Does this type of learning save money? Important to look at cost analysis.
- Need both perceived (qualitative) and actual (learning assessment – quantitative) benefits.
- Types of feedback: questionnaires, interviews, focus groups, online communication groups/discussion forums Should also include tutor feedback as they need to be “on board” otherwise integration will be affected.

6. What can portal-sourced video and audio resources really add to teaching and learning?

Facilitated by Clive Young (Glasgow Caledonian University)

Value of time-based media:

- Supports a range of different teaching and learning styles, mixes and blends
- Access off campus, anytime
- Flexibility – paths, resources, (Resource-based learning)
- Repeatability – revision very important
- Visualisation, simulation, animation - access to things you don't normally see
- Introductory material – base knowledge terminology
- Skills development (students and staff)
- Raises awareness of different ways of teaching/learning, a new teaching method
- Re-use, multiple use, multidisciplinary of resources
- Emotion – 'real life'

Value of portals

- Holistic view from Portal 'see everything that is available'
- Wider range of materials – but context is king (who created it? When? Why?)
- Should be a way of re-labelling materials with new interpretations
- Allows access to multiple views of a subject
- Can support class-based activities as well as online
- Quality assured?
- A way of sharing ideas for using media
- A way of sharing ideas for teaching and learning
- Allows specialisation of production

Also discussed

- How do we assess quality (technical, production standards, educational, accessibility)
- But issues of quality vs value –? eg Taking head +slides – very popular because it has local value
- Need to allow for customisation + control
- Has to be Faster + cheaper than DIY to succeed
- 'Not invented here' not always bad, but acknowledges local educational production expertise

JISC User Requirement Study for a Moving Picture and Sound Portal – Telephones Survey (HE/FE staff)

Name: _____

Sector: HE FE (1)

Institution: _____(2)

Subject: _____(3)

Position: _____(4)

Gender: Male Female (5)

1. Do you use moving pictures and sound (also known as time-based media) resources for your teaching, research or support staff activities? (Please circle one only).

Yes 1 (If Yes, do not do the interview)

No 2

2. How many of the following technologies do you currently use for your teaching/research/staff support activities? Circle each one as appropriate.

Powerpoint	1
VHS (standard video)	2
Computer software	3
Email	4
Text-based conference	5
Web pages	6
VLE (blackboard, lotus notes, etc)	7
Videoconference	8
None	9

(For **each** of the following statements, please chose the **three** with which you most agree).

2. Apart from time, what would be the main reason preventing you from using time-based media resources?

Not appropriate for my subject	1
Too technically difficult	2
Funding not available	3
No local support	4
Need more training and guidance	5
Not sure how to use this type of resources	6
Copyright issues	7
Low priority	8

3. In your view, what would be the value of using time-based media within your subject area? Please circle one only.

It can bring 'real life' into the classroom (i.e. like a traditional video)	1
It can provide a more interactive teaching environment (that students can access to resources any time and remotely)	2
It can be integrated with other web resources (such as VLEs, quizzes, discussions, etc)	3
There is no value	4

4. If you wanted/needed to, how would you like to access to time-based media resources for your teaching/research/support staff activities?

Through:

Subject based Portal (via the Web, search by academic disciplines)	1
Institutional Portal (via the Web, quick access embedded within institution)	2
General Portal (via the Web, flexible subject cross-searching)	3
CD-Rom catalogue	4
Resource Sharing Network (sharing, uploading, downloading facilities)	5
Develop my own resources	6
Not interested in using them	7

Thank you very much for your time doing this survey