“Design an interface for a Webct session for the Digital Multimedia module, which meets the students’ requirements.”

By

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Abstract

The multimedia module from the department of Information Management at the University of Sheffield has run for many years. The information to support the students’ learning has been available previously on Dagda and Ogma, with paper based information and a CDROM to accompany them. However, the growing increase in the use of Webct for aiding students on courses at the university has made it apparent that the multimedia course should move to webct. Thus allowing all the information a student needs to be found in one place.

The aim of this project was to design a Webct session for the multimedia module, which meets the student’s requirements. This report details the user-based approach that was adopted to achieve this. Such approaches differ from traditional system-based approaches in that the user is central to the design of the interface, to the point where decisions are dictated by them, as opposed to the designer, wherever possible.

The most important element of user-centred approach is usability evaluation. In the approach detailed in this report, the design process of the interface is iterative and comprises of generating and collecting qualitative and quantitative data from usability evaluation sessions, then designing/re-designing webct session accordingly.

The design process begins with a questionnaire about the existing Dagda and Ogma sites and the potential Webct session by previous Multimedia students and an interview with the module co-ordinator. Following this, an initial design is produced and a focus group is arranged to receive feedback from potential users. Based on the feedback collected by participants, potential designs are sketched, one of which is converted into a prototype on webct for usability testing. Finally the webct session is redesigned and the design process culminates in the implementation of a final design on Webct.

It is concluded that, differing to popular belief, a user-based approach to interface design can accumulate significant results, without the need for large amounts of time, many participants and huge amounts of money.
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Chapter 1: Introduction

The Digital Multimedia module held at Sheffield is popular with students with a keen interest in designing using a range of media. The course has been running for the last 5 years and coordinated by Daniela Petrelli.

Each year 15 to 25 students undertake the course, with the current year being an exception due to an insufficient number of teaching staff. The course currently offers students supplement material to support their lectures and materials on Dagda and Ogma.

Dagda is the Student Resources Internet Pages for the department of Information Studies. It provides students with support, advice and links. Dagda provides teaching, ICT and Social resources. While Ogma provides students with software information and a personal file space.

The university now uses Webct for the majority of modules to support students’ learning. The department of Information Management uses webct to support their modules. Digital Multimedia course has yet to use it. There seem to be few reasons why, mainly due to lack of time and laziness. But recently the advantages of using webct have become apparent and the implementation of a session on webct is now being asked for.

Before the webct session can be constructed the session needs to be designed and series of steps need to be carried out. These steps include, examining existing research, observations/interviews/questionnaires, analysis, initial designs/mock ups, focus group, development of designs, usability tests then an evaluation process to produce the final design for implementation.
1.1 Aims

The overall aim is to design an interface for a Webct session for the Digital Multimedia module, which is designed to give the students access to information to support their learning. Design a session to meet the students’ requirements in a fast and simplistic way. Concentrating on what types of media should be used, how information should be displayed, how information should be broken down and searchable.

The design of the interface should be influenced in part by the results of existing research into interface design. However such information is scarce, it will first be necessary to carry out an initial questionnaire and an interview with the module coordinator.

Based on these findings, a focus group will be conducted using a sample of previous students, the results of which will then be used to facilitate the construction of a detailed specification of requirements. Based on these requirements, an initial design will be made. Following a usability evaluation session on a prototype, the proposed session will be designed accordingly. Finally, a prototype of the interface will be implemented on Webct.
Chapter 2: Previous Research

2.1 Multimedia

Multimedia uses various technologies to support the use of animation, video, and audio to supplement traditional media of text and images (Nielson, 2000). These new media provide more design options but require design discipline. The use of unconstrained multimedia results in the user interface confusing the users and makes it harder for them to understand the information so it is important to ensure multimedia is used effectively.

Videos are now used to drive distance learning applications. It is becoming more common in workspaces of institutes and universities to use virtual workspace and videos in different forms. Multimedia can enhance learning and offers best practice guidelines for building innovative multimedia materials according to (Huang, 2005). There are different factors involved when planning to including multimedia on the web, including; response time, resolution of displayed video, colour fidelity and stability of the playback process (no freezes, glitches or discontinuities) (Fernandez & Garcia, 2001).

2.2 Web content as a learning resource

Content published to the web is appropriate and purposeful to students’ learning (Warwick University 2004). Web content is now regarded as an “organised set of ‘learning objects’, an electronic library, and ‘content management system’.” (Warwick University, 2004). This kind of content is regarded as administrative support for learning.

The most important thing about a website is its content (Chapman, 2004). The content is used to support leaning and teaching in the classroom (Warwick University, 2004). Content is seen as supporting rather than primary, therefore important to relate resources to specific learning activities.
Within each subject there is potential to create a wealth of online educational material (Warwick University, 2004). Making material easily available to students in the form they were developed for print is useful, because it means only one copy needs to be updated which is available for everyone which makes organising materials easier.

The effective use of communication and information technologies (C&IT) in teaching and learning is increasingly important (Littlejohn & Stefani, 1999). There is a revolutionary change in culture within higher education in the United Kingdom, due to different methodologies needing to be more commonly used. The development of new skills and knowing when to apply these is very important.

2.3 User interface design and HCI

Human computer interaction (HCI) is a communication between a (single) user and a computer (Elsom-Cook 2001). HCI concentrates more on the idea of an interface, which is a mechanism by which users communicate their goals and objectives, and some instructions to the computer while the computer communicates its current state, activities, and related information to the user.

“User interface design is not just about the arrangement of media on a screen” (Lopuck, 1999). Application user interfaces play a dominant role in achieving satisfaction from end users so should be considered as vital (Fernandez & Garcia, 2001). User interface design is about designing an entire experience for people, the ‘look and feel’ is therefore very important. The design process involves ergonomic aspects such as facilitating navigation and interactivity.

2.4 E-learning and VLEs

At the heart of e-learning services is the requirement for a learning management system or virtual learning environment (VLE). It is vital that the system or environment can be tailored to the needs of each learning provider and can work with corporate management and administration systems to create a managed learning environment (FD Learning, 2004).
There are a large range of different VLEs available for benefiting teaching methods (UK Centre for Legal Education, 2003). They include a list of VLEs including Blackboard, FDLearning, FirstClass, Lotus Learning Space, OSMIS, and WebCT. However, some higher education institutes are now developing their own VLE software, such as COSE, CO3, and CoMentor.

WebCT is the world’s leading provider of e-learning systems for educational institutions. Thousands of colleges and universities in more than 70 countries worldwide are expanding the boundaries of teaching and learning with WebCT (WebCT, 2004). Most modules at universities have a course area in WebCT which provides students with communication tools and in some courses, learning materials and activities.

2.5 Understanding Users

Preece (2002) highlights the importance of understanding users, especially their cognitive aspects. The way an interface is designed can affect how well people can perceive, attend, learn, and remember how to carry out tasks. The main benefits of conceptual frameworks and cognitive theories are they can explain user interaction and predict user performance.

Affective aspects of interaction design are concerned with the way the user reacts and responds in emotional ways according to Preece (2002). She states that “well designed interfaces can extract good feelings in people”. Some interfaces can be a pleasure to use while badly designed interfaces can make people frustrated and angry.

2.6 Interaction design

Preece (2002) discusses the important of interaction design and its processes. Interaction design is concerned with designing interactive products to support people in their everyday and working lives. Important aspects to consider include; understanding how users act/react to events and how they communicate/interact with
one another. It’s also importance to understand how to design different kinds of interactive media in effective and visually appealing ways.

There are four basic activities involved with the process of interaction design according to Preece (2002). These include:

- identifying needs and establishing requirements
- developing alternative designs that meet those requirements
- building interactive versions of the designs so that they can be communicated and assessed
- evaluating what is being built throughout the process

They are intended to help others and to be repeated in the design process. Evaluating is essential in the design process and is usually addressed through a user-centred approach. There are many different ways to carry out user-centred design including; observing users, talking to users, interviewing users, modelling user’s performance, and handing out questionnaires, etc. It is also important to understand what people currently do.

Along with the four basic activities of design there are also three key characteristics of the interaction design process;

- Users should be involved through the development of the project.
- Specific usability and user experience goals should be identified clearly documented and agreed upon at the beginning of the project.
- Iteration through the four activities is inevitable.

Lopuck, (1999) also addresses the three steps to designing a user interface he states them as; identifying your audience and message, determining the setting and creating an experience Ergonomics. Jones & Okey produced a list of interface design concepts which could be seen as ways of addressing Lopuck’s three stages, based on issues which should be considered during the design and development process, including; Browsing, Information access, consistency, Searchability and Tool availability.
2.7 Research Methods

Preece (2002) suggests different methods for data gathering, including questionnaires, interviews, focus groups, workshops, naturalistic observation, and studying documentation. Questionnaires are one form of data gathering. It is good for answering specific questions using quantitative and qualitative data. Interviews are good for exploring issues and concentrate on qualitative data.

Preece (2002) discusses Focus groups, which are good for collecting multiple viewpoints using some quantitative but mostly qualitative data. Focus groups are a form of group interview; usually involve three to ten individuals. The advantages include; highlights areas of consensus and conflict, and encourages contact between developers and users. They are usually held to extract user requirements prior to initial design.

Usability represents the ease with which the user can learn and make the most of the interface (Elsom-Cook, 2001). A system where all the commands can be selected from menus is likely to be more usable than one where there is just a command line and the user has to remember everything. To ensure a interface is usable, the designers should; put the user first, put the user in control, not provide too much choice, not make assumptions about the users’ behaviour, and know the limitations of the interface (Chapman, 2004).

Design and usability principles are useful heuristics for analysing and evaluating aspects of an interactive product. Nielsen (2001) developed ten main usability principles (see appendix 1). According to Preece (2002) a prototype allows users to imagine the final design and interact with the envisioned product. Prototypes are useful to discuss ideas with stake holders and are an effective way to test ideas.

2.8 Visual appearance and Graphic Design

Visual design and the layout of the interface change the way it communicates to the user (Elsom-Cook, 2001). Issues include how users perceives the objects in the interface, how they’re grouped and structured to optimum use of the available space,
aspects providing overall consistency using metaphors, and visual consistency. All these are also referred to as the ‘look and feel’ of the interface.

The issues regarding observations about principles, layout, and colour are all vitally important when designing and implementing a user friendly interface to help aid users rather than limit them in anyway (Elsom-Cook, 2001).

2.9 Summary of existing research

The basic topics concerned with designing have been addressed along with content and the way learning resources can be put online. This review has only touched on the areas and there is a lot more information needed to have a thorough understanding of the topics to be able to design an interface for a certain purpose.

The recommendations for further research will therefore be necessary, looking in particular at topics such as the methods for research during the design and development process and further analysis of more case studies would be beneficial.
Chapter 3: Methodology

For this research project a variety of different research methods were used. To find out the initial information needed a questionnaire was handed out to previous multimedia students and an interview was carried out with the module coordinator. From these results a focus group was held to assess mock ups and specific topics were discussed to find the students preferences, including; colour scheme, icon style, content and navigation/organisation.

3.1 Questionnaire

A questionnaire was required to find out the thoughts and preferences of students who took the multimedia module. A pilot questionnaire (see appendix 2) was produced and handed out to four participants to check the wording and understanding of the questionnaire. The participants noted some changes needed and these were reviewed and the questionnaire was amended to produce the final questionnaire, (see appendix 3).

The final questionnaire was handed out to the previous year students by hand in paper format. There were 15 questionnaires handed out as no contact information was available for previous students. 15 responses were completed which shows a 100% response. However because only a small sample was asked the results may not be as accurate and give such a clear picture than if 100 questionnaires were handed out.

However due to the nature of the project it was impossible to ask more participants as they needed to have taken the multimedia module to understand what is asked of the students to complete the module. If this project was to be carried out again then it would be necessary to contact more previous students to get more accurate and reliable results.
3.2 Interview with Module Coordinator

An interview with the Multimedia Module Coordinator, Daniela Petrelli (see appendix 17) was carried out. The aim of the interview was to elicit information about why there is not currently a webct session and if they would want one to be designed. Also to extract what the module coordinator wants from the new webct session, and their preferences on design and content.

The interview was held on 11\textsuperscript{th} March 2005. The interview was planned beforehand and an agenda was produced with a list of questions to ask. The interview began with a small introduction about what the interview was for and the aims. The interview lasted forty minutes with a mixture of open and closed questions being asked. The interviewer drew the interview to an end by asking if there was anything else she would like to add, then thanking the module coordinator for her time and help.

3.2. Initial Design

Based on the results from the questionnaire and the comments from the interview with the module coordinator in the previous section, initial designs were sketched. Sketches for the proposed mock ups used for the focus group can be found in Appendix 10.

The designs for the mocks ups were influenced by the researcher’s preferences and also from the results of the questionnaire and the comments from the interview with the module coordinator. It was also influenced by existing webct sessions set up for other modules and colour schemes were taken from the existing ones.

3.3 Focus Group

A focus group was then carried out to assist in the design process. The focus group was held on Sunday the 13\textsuperscript{th} March 2005. It was held in the researcher’s house and drinks, sweets and crisps were offered to the participants to thank them for their willingness to contribute.
A more detailed report can be found in appendix 11. This gives the specific details of the focus group and the outcomes. However, a brief summary of the methodology is given below, and a summary of the results can be found in chapter 4.

There were 6 participants in the focus group, all from a broad range of academic capabilities. The goals of the focus group were to determine and highlight the preferred design options for the WebCT session by the students. The main goals of the group were to address and find out the preferences for; colour, text, background, buttons and icons, layout, terminology for the different sections of information, and content.

An agenda had been planned prior to the focus group which helped to run the group. The researcher led the focus group and gave a brief introduction, the researcher showed the group screen shots of the existing Dagda site (see appendix 4) and existing WebCT sessions (see appendix 5) used for other modules. The group were asked to discuss various aspects.

The group were shown mock ups for the INF308 WebCT session that had been designed, (see appendix 10) and asks them to comment on the designs. Colour scheme charts (appendix 6) were shown and discussion made. Examples of icons (appendix 7) and banners were shown including examples. Layout was then discussed and examples shown (appendix 8). A small activity was organised to arrange the layout of the homepage and to show where each piece of information will be found.

The researcher wrapped up the focus group by asking what their goals were when using WebCT and if they thought anything was missing from the content that had been suggested for the session. The researcher finally asked the participants if they was any other information or comments they had to give that they thought would be important in designing the WebCT session for the module.
3.4 Proposed Final Design

Based on the user requirements specified appendix 18, the initial designs which were produced for the focus group were developed and new ideas were sketched. Sketches of the proposed final design, selected for usability testing, can be found in Appendix 19.

The design of the proposed Webct session for the Digital Multimedia module was heavily influenced by the existing webct sessions used for other modules in the information management department of Sheffield University. This was to be expected as there is a standard format and limitation of what can actually be designed on the webct sessions as the software is designed by an outside company.

3.5 Usability Test

After carrying out the initial research and the prototype was produced on Webct the researcher carried out a usability test on the design. Four participants carried out the test. However, if this had been carried out where there were no time constraints, then more participants would have taken part. The tests would also have been recorded by a video camera or by a dictaphone, so the researcher can look back and analyse the findings.

The usability test was carried out in test conditions, in a room with only the participant and the researcher, in total silence to ensure limited amount of distractions and total concentration on the task at hand. Each participant used the same computer to eliminate unfairness; they were also given the same instructions and the same tasks.

Appendix 12 shows the 6 different tasks the participants were asked to carry out. Each participant was timed to see how long they carried out the tasks individually; it was noted if they had completed the task and if any errors had been made in locating the information. The participants were then asked a few questions at the end of the tasks to give their opinions on the design, see appendix 13 for the different questions asked. The researcher summed up the usability tests by thanking the participants for their time.
Chapter 4: Results and Analysis

4.1 Questionnaire

The first part of the user-based design process involved a questionnaire being given out to 15 previous Digital Multimedia students. The results of this questionnaire and user comments arising from it are summarised below and discussed in more detail in appendices 15 and 16. All students are enrolled on the BSc Information Management course at Sheffield University (Q1), as they were aware of the benefits and limitations of the course.

All students achieved a third or more in the exam and practical part. The majority of students did better in the practical part of the module (60% achieving 2.1 or more) (Q2) than in the exam part (53% achieving 2.1 or more) (Q3). 53% claimed to attend lectures and 47% only attended sometimes. Similarly, 47% attended practicals and 47% sometimes attended while 7% didn’t attend any practicals. 7% more students attended the lectures (Q4) than the practicals (Q5). This however does not help to explain why participants did better in the coursework rather than exam.

67% of students used dagda and ogma weekly or more than once a week (Q6). However, 7% never used the site and disappointedly no students used it daily. The results highlight 87% used dagda for practical information and handouts, and 73% for lecture information and handouts (Q7). This shows that these pieces of information are important for the students.

It is apparent the course outline (53%) and assessment (60%) resources are used, while the teaching staff information was left unused (Q7), and 7% used the calendar. This shows that these resources are wasted and may not be needed in the future. 80% agreed or had no opinion with the statement “I found the course material on dagda useful” (Q8). This proves that the material on dagda is useful to students and should be included on the new webct session.
Although most of the students used dagda on a regular basis it is apparent that they use webct more frequently (Q9) (60% more than once a week, 27% weekly, 7% daily), which means that moving to webct is going to be beneficial to students. Question 10 shows all students have access to computers to use webct, either at home or at university, so all students can use the new webct session.

The majority of students are using webct to supplement lectures and practicals (87%) and for missed lectures through viable reason (67%) (Q11) which is what the resources are there for. The bulk of participants claimed to use all facilities (Q12); bulletin board, lecture handouts, course outline, information resources and assessment information. However, 7% t claimed to use the teaching staff information. This shows that these facilities should be used for the multimedia module as students are keen to use them.

It becomes apparent that the preferences for the new webct session should include, lecture and practical handouts, course outline, information resources, assessment, good examples of coursework, and animations of how to use the software (Q13), with the use of images and animation (Q14).

Regards to the media they would like to see used on the new webct session, all participants want to see images, and most animation. Videos of lectures (27%) are popular but not popular enough to implement due to the expense and time needed. Only 33% chose audio, which means that it is not that vital to include as the majority chose not to have it.

It was also apparent from the results that information should be organised by lecture and week (53%) (Q15), using Webct (60%) (Q16). The idea of having three separate deadlines for coursework seems to be preferred by 53% of participants, as it seems to be more beneficial as they can spread their work load out over the semester.

The other comments that some participants added seemed to be based on the module content and teaching methods and not related to the design element of the webct session. From these comments the general feel is that they were not happy with the support they were given and felt practicals were not in enough detail.
However one commented that the material should be available through one resource, which once webct is implemented it will be. Also one individual stated “websites have more flexibility”, however; the majority chose to have webct (Q16).

4.2 Interview with Module Coordinator Results and Analysis

The interview with the Multimedia Module Coordinator, Daniela Petrelli was carried out on the 11\textsuperscript{th} March 2005 (see appendix 17) and summarised below:

The students last year used dagda as a cluster of information, for just downloading lecture notes and practical notes. The coordinator couldn’t actually see what for though as unlike webct there are no automatic mechanisms and control to see which students use which facilities and for how long.

The module coordinator has started to use webct this year for other modules. It is due to her laziness the information is still on dagda and ogma instead of webct. However, this year she has seen the benefits of webct, including controlling access which means better security, so wants webct to be used instead. However, she is unsure of the level of detail that should be included - the minimum effort to reach the maximum result.

There should not be too much information available on webct that students do not attend lectures and practicals, as it will interfere and effect the way students learn. However, some students do not attend lectures any way so would be beneficial to them to have the added resources.

Lecture notes, practical notes, reading list and module outline will still be available on webct, however, the calendar may not be. The lecture and practical notes should be organised simply and as easily as possible, the simplest would be by lecture. Videos of lectures should not be available to students. Due to size constraints and the lack of software available in the University for Streaming Videos, along with the data protection act protecting students.
To give students a better environment to learn multimedia in, a forum where questions can be asked to other students would be included, if it requires a lot of work to implement and won’t get used then it will not be included. Good examples of course work will not be included, because it may affect the work of future students, due to the examples being copied. The coordinator felt that having animations is something that could be added in the practical sessions instead.

The introduction of three different deadlines for the coursework is suggested. This is because some students are very badly organised so encourage better produced quality of work. The session will offer support to students who do not attend lectures. Allowing students to learn by themselves is a good thing for the department as well; it allows students to receive help without contacting a member of staff.

The security problem which Webct overcomes is a major benefit. Another advantage is the idea of consistency, as the majority of their other modules use Webct so they are use to the facilities and the layout.

### 4.3 Focus Group Results

The focus group produced a lot of useful feedback which needs to be taken into account when designing the final design of session on Webct for the multimedia module. The content and design suggestions followed by opinions given by the participants are summarised below and in more detail in appendix 14.

There should be some kind of communication between students and lecturers, and students and students, different possibilities include; chat, forum, and bulletin board. If the lecturer was unwilling to answer queries because of time constraints then having a forum where students can help other students in a less formal and a more relaxed environment, would be more beneficial.

The content on the assessment page should not include good examples of work as it may scare new students taking the module and it should be shown in a lecture or a practical session so need to be repeated on the Webct session.
Merging the two mock designs (see appendix 10) together would make the ideal design, with the simplicity of the green one, the colour scheme of the blue and no table around the icons.

The colour scheme was decided, black for the text, blue for the links, and purple for the visited links as the colours are the standard for most interfaces and websites. The background colour should be white with no image. The default banner should be used, aligned in the centre, which reads ‘INF308: Digital Multimedia’, with a picture on the left just before the writing.

Photo icons should be used because of their size and because buttons are too drab and casual are too small. Writing should go under each one to give a short description about what it is. The overall colour scheme should be blue, as it looks nicer and fits with the university’s colour scheme.

The homepage layout should be a ‘News/Alerts’ section at the top of the page, along with an ‘important dates’ section, which should include the three coursework submission dates and nearer the examination period the date of the INF308 exam.

The material for handouts should be arranged week by week and under each sub heading should include lecture and practical handouts. The other links from the homepage should include ‘week by week’, ‘home’, ‘forum’, ‘INF308 information’, and ‘assessment’.

The page linking from week by week should include practical handouts and lecture handouts, the page linking from INF308 information should include teaching staff information, course outline, and reading list / references, and the page linking from assessment should include links to past exam papers, exam information and coursework information,

Comments on the existing modules’ webct sessions included, “the colour schemes look ok”, “simplicity is good”, “good use of frames”, “good use of breadcrumbs to show the user where they are on the interface”, and “easily navigated”.

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On certain screen shots comments such as “the calendar is not used by the designer so what is the point in having it available?” were given which suggests that the designer needs to consider if the calendar is a necessity to have as some students question the importance. Also the designer must limit the amount of information given on a page and to reduce the amount of scrolling the user may be required to do.

On the Blue design (see appendix 10) the participants commented that the design was a lot better than the existing dagda site. They liked the use of frames and liked the pictures which were used for the icons. However they also commented that there were too many different shades of blue used and the pink for the writing did not work well.

On the green design (see appendix 10) the participants commented that they like the use of more white and it looked better than the previous designs they had seen. They commented that it was “simplistic and easy on the eye” and “the icons look good with out the table”. However they did say that “centring the icons would make the design better”. They then added that “merging the two designs together would make the ideal design”.

A short description under each icon of what it is and what can be found on the page that links from it should be added. The tip of the day should not be used as it never changes and students do not look at it. Information should be shown over a number of pages rather than all on one and scrolling should be made limited to maximum ease of use.
Chapter 5: Proposed Final Design

The proposed final design is based on the results from the questionnaire, interview and focus group. The user requirements are especially taken into account, which can be found in the appendix 18. This design will be tested in a usability test to then produce the final design for the Webct session for the Multimedia module.

Figure 5.1 shows the screen shot for the homepage. As you can see the design is simplistic and eye catching with the blue colour scheme used. The layout is spacious to use the optimal amount of space. Also the design follows the user requirements as the design, layout and content are all clearly met, including use of icons and the layout in terms of banner, news/alerts, then important dates, then the icons to go to the respective links, which are evenly distributed across the page.

Figure 5.1: Screen Shot of Homepage

Figure 5.2 shows the layout and design of the week by week section. This design has been devised to allow students to locate, and retrieve the relevant lecture or practical handouts easily and simply. The content of this page is useful for students to find the information they request either by week or by topic. The only problem to this design is that students are faced to scroll down the page to find the latter weeks, however taking into the consideration of the importance of the information and that they do not have to scroll far, it does not pose a too big a problem in the design.
Victoria Street  How a session for the Multimedia module on Webct would be designed to fit students’ requirements

Figure 5.2 Screen Shot of Week by Week

Figure 5.3 is of the INF308 information page, it clearly sets out the different pieces of information about the course and information about what the students will need to use to complete the course successfully. The layout of the page is simplistic and utilises all the space without the user having to scroll down to find the information.

Figure 5.3 Screen Shot of INF308 Information
The forum page is also simplistic and easy for the prospective students to understand and use. With use of different topics in specific rooms, it allows the students to go to the room which meets their specific needs. The assessment page includes exam information and coursework information separately so students can find the information that is applicable for the specific time in the course without having to read all assessment details.

As you can see the theme of the session is carried out through all the pages and the colour scheme does not change, this helps to give the users a sense of familiarity whilst they are using the Webct session. You can find larger screen shots of the proposed final design, including screen shot of the forum page and the screen shot of the assessment page in appendix 19.
Chapter 6: Usability Evaluation

All four participants were able to complete all of the tasks. Task one, “Find the lecture handouts for week 6”; proved no problem for 50% of the users, however the other 50% went to the practical handouts first. On average it took users 22 seconds to complete the task.

Task 2, “Find out who the module co-ordinator is and their email address”; proved a problem for 50% of the participants as the information on who the module co-ordinator was and what the email address was, were located in separate locations. However, the other 50% didn’t find the task hard as they presumed who the co-ordinator was rather than finding the information. The average time for the task was 1 minute and 10 seconds.

Task 3, “Find the adobe tutorial on “correct color in video””; was no problem for 50% of the users; however the other 50% looked in week by week first for the information. On average it took users 36 seconds to complete the task. Task 4, “Find out when the coursework is in for” proved to challenge 75% of the users, as they didn’t see the important dates on the homepage, so they went to assessment first. However the average time for this task was 20 seconds.

Task 5, “find the past exam papers for the module” on average took 6 seconds, and none of the users had any problems. Task 6, “find out when, where, and what time the lectures and practicals are” proved challenging for 75% of users as they looked it up in module outline, where as 25% of users realised the information was on the homepage. On average the task took users 18 seconds.

The overall feeing of the session was “good”, “looks nice”, “clear and concise”, “standard, and easy to use” and “really good design”. The users seemed generally positive about the design, they especially like the icons, and the clearly laid out front page. However, the participants didn’t like the fact the information was in two different locations for task 2, they didn’t like the use of arrows to expand in week by week, also the e-learning hub in the course menu on the left hand side, and the fact that the forum was in fact a chat facility.
The general improvements needed to the proposed final design include; putting module ‘co-ordinator’ next to Daniella in the staff information; the adobe tutorials do not load properly, so need to be saved as a PDF then put into webct; change the ‘end of week…’ to specific date for when the coursework is due in on the homepage; get rid of ‘e-learning hub’ in course menu and change the order of items into importance, therefore put forum last and homepage first; expand all arrows in week by week so users don’t have to.

The general feeling about information that was previously on a CDROM for students, should be made available by giving each student a copy of the CDROM to keep, so they don’t have to download anything on to their computer, and have a hard copy to use in case of any unexpected problems. Also the suggestion of having a copy available to download off webct was made, to ensure each student received a copy, even if they didn’t attend lectures/practicals, also this would reduce the possibility of scratching that could be a predicament in the use of CDROMs.
Chapter 7: Final Design

The final design for the webct session for the multimedia module was based on the design process that involved an initial questionnaire, interview with the module co-ordinator, mock-ups, a focus group, proposed final design then a usability test where the design was tested by potential users. The problems and limitations of the design that arose from the usability test were then amended and the final design was produced.

Figure 7.1 shows the final design for the homepage, it has amended the course menu on the left hand side of the screen, by removing ‘e-learning hub’, and changing the order to ensure ‘homepage’ was first and ‘forum’ was last. The ‘important dates’ section has been changed; it now shows the specific dates of the submission of coursework, including the time. The other thing that has changed on the homepage is the icon for ‘forum’ as the researcher had to change the function from chat to discussion to ensure that students can post problems, and then receive feedback on another day rather than straight away, allowing other student to see the problems and answers.

Figure 7.1: Screen shot of final design of homepage
Figure 7.2 shows the week by week section, this has slightly changed to make sure the arrows have been opened to show all the lecture and practical handouts for each week, ensuring that students do not become confused about how to get the information.

Figure 7.2: Screen shot of final Week by Week page

Figure 7.3: Screen shot of final Assessment page
Figure 7.3 shows the final design for the assessment page; this has not changed from the proposed design, as no problems found in the usability tests. Figure 9.4 shows the final design for the INF308 Information page, this too has not changed from the proposed design, and however, some of the links from it has.

Figure 7.4: Screen shot of final INF308 Information page

Figure 7.5: Screen shot of Adobe Tutorial page
Figure 7.5 shows the improved version of one of the links from the Adobe tutorials. Previously they did not load properly as only the web page had been saved. But not each tutorial has been saved as a PDF file so the students can easily download and view the tutorials without having to worry about whether they will download properly or not.

Figure 7.6 shows the updated version of Staff Information, as the previous one did not specify who the module co-ordinator was. Now the Information clearly states who the co-ordinator is and their email address is found with this information.

Figure 7.6: Screen shot of final Staff Information page

Figure 7.7 shows the screen shot of the final design for the forum page. Previously the researcher had used a chat tool for this, and was made aware of the problem in the usability tests. A discussion tool has now been used for the forum, which enables users to post questions that can be seen at any time. This also means that other students or lecturers can post replies or other questions in response. This allows students to find solutions to problems without having to arrange appointments with tutors or repeat questions being asked to tutors.
Figure 7.7: Screen shot of final Forum page
Chapter 8: Conclusion

The project used an extensive range of research methods; it progressed from mock-ups to an initial design using results from the questionnaire and interview. A proposed design was made with the results from the focus group, which was then tested in a usability test, which after improvements ended with a final design.

Overall a final design for a webct session for the multimedia module was achieved, that does meet the students’ requirements, as the students played an active role throughout the design process. The design is easy to use and is included all the information the students will require when studying the module. The design allows students to find the information in one place in an environment that is consistent and familiar to them. The colour scheme does not affect the readability of the information and is pleasing on the eye.

There are certain limitations of this project. For example the research was only carried out on a few participants, on a larger scale project then more than 15 participants would be asked to carry out the questionnaire, but due to the limited amount of past Multimedia students available this was not possible in this project. Also a larger focus group would have been more beneficial with new ideas to input.

The usability test would have better off undertaken by more than four users and a larger amount of tasks set to ensure there are no other underlying problems with the design that the original participants did not pick up on. Also the usability test should have been taken in test like conditions and in a less distracting environment. However due to the time constraints and the scale of the project this was not possible.

Recommendations of another usability test on the final design would be beneficial before the design was implemented for the module. However the researcher did not have time to carry out this final process due to the time constraints. Another recommendation, to carry out further research into what content the students would like on the webct session in addition to the information currently on there.

Word Count = 6,800
Bibliography


