Unit 7: Introduction to Website Development

Delivery guidance

Approaching the unit

This is a very accessible unit for learners as they will already be very familiar with a wide variety of websites. It is also easy to visit many real websites to support their learning.

The purpose of this unit is for learners to understand the key concepts of website development, and to design and develop a website to meet client requirements.

Learners will be taught about the uses and features of websites and how to use web authoring software to create a website.

Learners need to be able to surf the internet from the classroom as well as having access to design tools, website authoring software, and a collection of assets that can be used as content for the websites they will produce. Learners will need to devote as much practical time to this unit as possible to enable them to grasp the web authoring software concepts.

Learners will design, develop, and test their own website to fulfil a brief.

Delivering the learning aims

When delivering this unit, you should give learners access to appropriate web authoring software. The use of basic HTML editing software is required such as Notepad++ which is available free of charge.

Learning aim A should link to the real world, using a variety of current websites that learners will find interesting to investigate so that they can identify their uses and components. The components of these sites should be easy to identify. Learners will need to be able to recognise the purpose of some of the tools and techniques used in these websites to deliver their functionality. **Learning aim B** should familiarise learners with how a client brief can be used to specify the intended purpose and user requirements of a website, and how this can be used to produce design documentation. Learners can be shown the use of styles, templates, and assets in websites. They can develop and practise their design skills by identifying the interactive features, creating UI/UX designs for actual websites.

Learning aim C focuses on developing and testing a website. Learners will need to consider the purpose of, and reasons for, using different web components, and how these can be used to address user requirements.

Relevant content for each of the learning aims can be found in the appropriate section of the student book and in the introductory slide set. This includes student activities, discussion points and practice assessments. The student book contains example HTML for all the features listed in the specification.

Some of the lessons will be predominantly practical with learners working on their websites. However, you should be ready to give recap sessions on topics that are causing learners particular problems.

Assessment model

Learning aim	Key content areas	Recommended assessment approach
A Understand the uses and features of websites	**A1** Uses of websites by organisations **A2** Components of websites	A portfolio of evidence that includes: • an investigation into two websites to highlight how they meet the needs of the site owners • design documentation for a website to meet user requirements • development and testing of a website to meet user requirements.
B Design a website to meet user requirements	**B1** Factors affecting website design **B2** Design documentation for a website	
C Develop and test a website to meet user requirements	**C1** Developing websites **C2** Testing and refining a website	

Assessment guidance

This unit is internally assessed. There is a maximum number of two summative assignments for this unit. Teachers should refer to the assessment guidance in the specification for specific detail, particularly in relation to the requirements for the Pass, Merit and Distinction grades.

L**earning aim A** is assessed using a written report. In the report, learners must demonstrate an understanding of the two websites being investigated, and how they meet the needs of the site owner. For example, purpose, performance, and components used to meet the requirements. To support learners in their report writing, they should be encouraged to use headings, sub-headings, and annotated illustrations, such as pictures and diagrams, to support explanations.

Learning aim B will focus on designing a website of at least 5 linked pages to meet user requirements. To access the higher assessment criteria, the designs will need to be detailed and comprehensive. If there is no access to UI or UX software, then paper-based designs can be used.

Learning aim C will initially focus on developing a website to meet user requirements. To access the higher assessment criteria, the website needs to be refined and improved with justifications given for decisions made.

C.P5, C.M3 and C.D3 all require some practical assessment. The learners will need to successfully develop a website against specified user requirements. The learners will also need to test the website and clearly show evidence of the testing process and how issues were rectified.

Evidence of the practical assessment should be provided, for example learner observation records, screenshots of the development process or screen recordings of the website being used. The completed website should be tested, and the learners should obtain feedback from others about the functionality, quality and useability of their website. Evidence should also be provided of the learner's responses to the testing and feedback.

There is an authorised assignment brief available on the Pearson web site for this unit covering all three learning aims. You can use this as it is or modify to meet local requirements. You could for

example split it into a separate assignment for each Learning Aim. There are also practice assessment tasks for each Learning Aim in the student book.

Getting started

This gives you a starting place for one way of delivering the unit, based around the recommended assessment approach in the specification.

Introduction
Introduce the unit by giving the learners a brief outline of the content and how it links with other units in the qualification. Engage learners by reminding them of the importance of the internet and websites to both personal and organisational users Explain that by the end of this unit they will have covered the skills needed to create their own website.

Learning aim A: Understand uses and features of websites
Consider starting delivery with a discussion to establish what learners already know about different websites. You can also use the introductory slides set covering LA-A to outline the topics covered in the learning aim.

Research tasks and case studies

Give learners access to examples of different websites that are targeted at different audiences (e.g. children, people with certain interests such as football or performance cars etc). Learners should identify the features used by the websites to target the audiences.

Discussion topics

- Ask learners what type of content or features would make a web site interesting to them? How would that be different for older adults such as their parents?
- What makes social media (Facebook, X, Instagram etc) so interesting and engaging for many users? What do learners use social media for?
- Online reviews of products or services can help with purchasing decisions but are the reviews always accurate and helpful?
- Some people such as 'YouTube stars' can make money out of the content they put on web sites. What is needed to make money from a web site?

Formative assessment activities

Provide learners with a list of several websites and ask them to provide feedback on:

- The purpose features, and target audience of each website (ideally choose web sites which are quite different in these respects)
- Mobile compatibility for the web site (for this task learners will need to view the site on both a desktop computer and a mobile phone)
- How user friendly is the web site (bearing in mind the target audience)? Are there any parts of the site which are difficult to use, confusing? For example, can you find things on the site easily?
- Does the site provide any accessibility features for disabled users (the student book LA-A section on accessibility provides some examples of commonly provided accessibility features)
- Does the site have well formatted content? Again, the student book provides some examples of what can be considered 'well formatted'.

For A2, provide learners with several websites which have both front end and back end components and ask them to identify the components and classify them as front or back end (for example a web site with a contact form the form itself is a front end component

but the recording and processing of the data entered on the form, such as adding the user to a newsletter email list, is a back end component). For the front end components learners should look for organisation branding (or lack of it, for example any inconsistencies in formatting and layout) and aesthetics such as colours, formatting and layout and how this matches the websites purpose and target audience (see the student book section on aesthetics so some ideas on this)

Preparing for summative assessment

The student book has a practice assessment at the end of the section on LA-A and learners can also draw on their experiences from the discussions and activities above. It is key that learners are encouraged to avoid vague statements about a web site (e.g. the layout is good) and provide explanations (e.g. the layout is good because…)

Learning aim B: Design a website to meet user requirements

This learning aim will give learners the tools they need to design a website to meet user requirements. The slides covering LA-B in the introductory slide set can be used to provide learners with an outline of the topics covered.

Research tasks and case studies

Looking at existing web sites and expand the work done in LA-A focusing on:

- User experience (UX) design, such as the information architecture used.
- User interface design, such as the text styling hierarchy (headings, subheadings, standard text, etc) and the layout used.

Encourage learners to use existing sites as an inspiration for their own designs, while avoiding copying sites and also avoiding overambitious designs that they would struggle to implement.

Discussion topics

- User requirements are sometimes hard to identify, how can you obtain clear requirements from users (for example using interviews, a check list/questionnaire or a document written by the user?). Why is it important that user requirements are fully defined?
- Why is design important? What might be the result of proceeding with development with no detailed design (it's not necessarily a disaster, an iterative design and development process with regular feedback from the client can work – but the assessment for this unit requires a completed design)

Formative assessment activities

Provide learners with opportunities to develop their skills in developing an information architecture, drawing site maps and wireframe diagrams and creating asset lists by giving them simple user requirements to create a design for. There are case studies and activities in the student book in the section on LA-B (Amy photographer and the school website) which can be used or adapted and an activity covering designing a web site for their own business idea. They can also create asset lists for these case studies.

Another possible formative assessment activity would be to give learners an outline user requirement for a web site related to a sports team or music group they follow. The learners can expand upon the requirements (for example identifying the target audience for the site) and then identify some of the features they will add (e.g. list of matches for the

sport team or performances of the music group). They can then develop a site map and create some wireframe drawings for the pages of the site. Learners can also work in groups of 2 or 3 reviewing and discussing each other's designs.

Preparing for summative assessment

The student book has a practice assessment at the end of the section on LA-B and learners can also draw on their experiences from the discussions and activities above. As learners will not yet have developed skills in creating web sites (that is covered in LA-C) it is important to guide learners to design a web site that they will have the skills to implement rather than something that is too ambitious. To obtain the higher marks for LA-C they need to closely follow the design they have created in the assessment for this learning aim.

Learning aim C: Develop and test a website to meet user requirements

This learning aim will give learners the skills they need to create a website using the selected HTML development tools. The slides covering LA-C in the introductory slide set can be used to introduce learners to the topics covering in this learning aim. Give learners plenty of tuition in in the creation of HTML to cover all the web page features listed in the specification.

Start by presenting learners with the theory behind HTML and introduce simple practical tasks so they can write basic HTML.

Deliver a series of supervised practical software workshops that will enable all learners to develop their HTML skills.

When you are confident that learners understand the key concepts, give them several practical exercises to practise these concepts. For example, learners could be given a number of practice tasks to work through at their own pace as the topic progresses.

As learners improve their website development skills and work through the various tasks, it would be useful to bring learners together periodically to recap the skills that they have mastered. Also, when a particular feature proves challenging for some learners, you could work through examples on an interactive whiteboard, with the assistance of other learners in the class. This will also give you a chance to ask learners direct questions to check their understanding.

Research tasks and case studies

What skills do a professional web developer need? Using internet job sites and searching for web developer jobs should give learners an idea of the sort of skills they will need to develop should they have an interest in this career.

Discussion topics

Discuss with learners the benefits and drawbacks of creating web pages using HTML versus using web development tools such as Dreamweaver. Is it important that a professional web developer understands HTML?

Discuss the reason for and methods of testing web sites. Testing isn't a very popular task but discuss with learners some of the issues that can occur if testing is not fully completed. You can also discuss why feedback from others can be particularly helpful in refining and improving a website and why it can be more effective than simply checking through the site yourself. You can also discuss with learners what aspects of the website will need testing and how these tests might be carried out.

Formative assessment activities

The student book contains HTML examples covering all the required web page features. Learners can try these examples out and then look at developing them by adding various features and combining them to create more sophisticated pages. They can also add their own content and formatting to further develop their skills. Once their skills are sufficiently developed, they can attempt to implement some of the designs they have created in the activities for LA-B. It may be possible for learners to use some of the graphics they have created in Unit 6 – Introduction to Digital Graphics and Animation in the web pages they develop. There are also some suggestions for activities in the student book section on LA-C.

Learners can work in small groups developing and using test plans for each other's web pages and also provide overall feedback on features, quality and usability, but remind learners that feedback must be constructive and specific.

Preparing for summative assessment

The student book includes a practice assessment for LA-C in and a complete sample assessment activity covering all the learning aims at the end of the chapter.

Details of links to other BTEC units and qualifications, and to other relevant units/qualifications

This unit links to:

- Unit 1: Using IT to Support Information and Communication in Organisations
- Unit 6: Introduction to Digital Graphics and Animation

Resources

In addition to the resources listed below, publishers are likely to produce Pearson-endorsed textbooks that support this unit of the BTEC International Level 2 Qualifications in IT. Check the Pearson website

To write HTML learners will need access to a computer and text editing software such as Notepad (included in Windows) or Notepad++ (free download)

Textbooks

Duckett, John – *HTML & CSS: Design and Build Websites*, John Wiley & Sons; 1st edition (November 8, 2011) (ISBN - 978-1118008188) – Introduction to website design.

Robbins, J – *Learning Web Design: A Beginner's Guide to CSS, HTML, Javascript and Web graphics*. O'Reilly Media; Fourth edition (September 4, 2012) (ISBN - 978-1449319274)

Websites

There are many web sites and tutorial videos on the internet covering every aspect of webpage development.

Pearson is not responsible for the content of any external internet sites. It is essential for teachers to preview each website before using it in class so as to ensure that the URL is still accurate, relevant and appropriate. We suggest that teachers bookmark useful websites and consider enabling learners to access them through the school/college intranet.