



Higher National Unit Specification

General information

Unit title: User Experience Design: Introduction (SCQF level 7)

Unit code: HT9R 34

Superclass: CB

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Version: 02

Unit purpose

This unit is designed to provide learners with an understanding of user experience design. Learners will develop skills and knowledge required to undertake the user experience design process and develop a prototype based on their research findings.

The unit will introduce learners to aspects of user experience design including visual design, information architecture, interaction design, usability, and the importance of responding to user feedback.

This unit is suitable for learners undertaking studies in software development and web design, or with an interest in developing skills in developing human-computer interfaces.

Outcomes

On successful completion of the unit the learner will be able to:

- 1 Analyse user requirements for an interactive product.
- 2 Develop a high level design for an interactive product.
- 3 Develop a visual design for an interactive product.
- 4 Evaluate a prototype for an interactive product.

Credit points and level

1 Higher National Unit credit at SCQF level 7: (8 SCQF credit points at SCQF level 7)

Higher National Unit Specification: General information (cont)

Unit title: User Experience Design: Introduction

Recommended entry to the unit

Learners should possess basic IT skills before commencing this unit. This may be evidenced by possession of the Core Skill in *Information and Communication Technology* at SCQF level 5 (or equivalent).

Core Skills

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill Problem Solving at SCQF level 5

Core Skill component None

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this Unit specification.

Context for delivery

If this unit is delivered as part of a group award, it is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements

Higher National Unit Specification: Statement of standards

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Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Where evidence for outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Learners should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Analyse user requirements for an interactive product.

Knowledge and/or skills

- ◆ Interactive products
- ◆ User requirements
- ◆ User personas/profiles
- ◆ Scenarios

Outcome 2

Develop a high level design for an interactive product.

Knowledge and/or skills

- ◆ Structure diagrams
- ◆ Navigation diagrams
- ◆ Wireframing
- ◆ Interaction design
- ◆ Analysis of user feedback

Outcome 3

Develop a visual design for an interactive product.

Knowledge and/or skills

- ◆ Visual design
- ◆ Interface design
- ◆ Information architecture
- ◆ Design elements

Higher National Unit Specification: Statement of standards (cont)

Unit title: User Experience Design: Introduction

Outcome 4

Evaluate a prototype for an interactive product.

Knowledge and/or skills

- ◆ Paper prototyping
- ◆ Digital prototyping
- ◆ User testing
- ◆ Recording and analysis of test results

Evidence requirements for this unit

Learners will need to provide evidence to demonstrate their knowledge and/or skills across all outcomes by showing that they can produce:

- ◆ product evidence

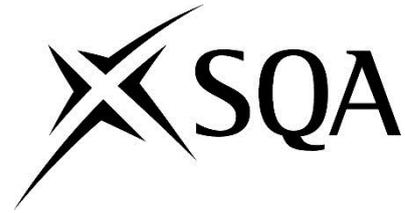
There is an opportunity to take a more holistic approach to assessment by integrating Outcomes 1, 2, 3 and 4. Learners will be required to carry out the following practical assignment based on a given brief, which must be described or recorded:

- ◆ Produce a minimum of three personas/user profiles with scenarios for an interactive product, to a given brief.
- ◆ Produce at least one structure/navigation diagram for an interactive product, based on user requirements.
- ◆ Produce a minimum of six wireframes for the screens/pages of an interactive product, based on user requirements.
- ◆ Produce a minimum of two visual design guides, and produce a minimum of six sample screen/page designs for an interactive product based on user feedback from the visual design guides.
- ◆ Produce at least one paper or digital prototype of an interactive product, based on user requirements.
- ◆ Carry out user evaluation of a prototype interactive product with at least three testers.
- ◆ Record the findings of the evaluations carried out at each stage of the process. Learners should be able to:
 - Identify structural designs / navigation features favoured by testers.
 - Identify layouts/ design elements favoured by the testers.
 - Identify problems encountered during prototype testing.
 - Identify areas for improvement, with recommendations for changes.

There is an opportunity for integrated assessment across several units, for example where learners are creating a website or computer application for another unit.

All outcomes will be assessed under open book conditions over an extended period of time. Assessors should ensure themselves of the authenticity of the learner's evidence. The *Guide to Assessment* provides further advice on methods of authentication.

The *Guidelines on Approaches to Assessment* (see the support notes section of this specification) provides specific examples of instruments of assessment.



Higher National Unit support notes

Unit title: User Experience Design: Introduction

Unit support notes are offered as guidance and are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this unit

This unit is designed to provide learners with an understanding of user experience design. Learners will develop skills and knowledge required to undertake the user experience design process and develop a prototype based on their research findings.

Outcome 1 is designed to give learners the knowledge and understanding of users of a product or system. By developing different personas and scenarios of use, the learner will take on the role and viewpoint of different users, aiding development of a product that will provide a better experience for the end users.

Outcome 2 looks at the overall design of an interactive product. Learners develop a high level design using feedback from potential users of the system. The result is a structure for the interactive product usually constructed of pages or screens, with a clear navigation system.

Outcome 3 concentrates on visual design and information architecture. Learners produce a range of designs and layouts to help ascertain user preferences and build a better experience.

Outcome 4 is about prototyping and evaluating the system before production. It looks at paper and digital prototyping methods and how to evaluate them with potential users. User experience design is the process of developing a product with user accessibility, usability and user pleasure in mind. It extends Human Computer Interaction (HCI) by addressing more aspects of the user and product.

One simple explanation of the differences between user interface and user experience is the development of the ketchup bottle. Original designs involved a traditional glass bottle with a cap on top. Extracting the ketchup was not always simple, often requiring the bottle to be shaken upside down. This could sometimes result in too much or too little ketchup exiting the bottle. As the product is used up, it becomes more difficult to extract from the bottle. Modern ketchup containers are squeezable plastic, which allows the ketchup to be squeezed in a more controlled way from the container. More recent designs have the cap forming the bottom of the container, ensuring the ketchup runs to the bottom for more easy extraction. The result is a much better experience for the user, who can control the flow of ketchup more easily, and extract more from the container with ease.

Higher National Unit support notes (cont)

Unit title: User Experience Design: Introduction

User experience design includes visual design, information architecture, interaction design, usability, and the importance of responding to user feedback.

In terms of visual design, a user experience designer will utilise principles of graphic design and visual communication in developing the look and feel of a product, as well as the front-end interface.

Information architecture, while related to the visual design, includes the structuring and arrangement of information to aid usability and findability. This can include the structuring of text into paragraphs, headings, sub-headings, etc., as well as the visual structure of a control interface.

Interaction design is about finding the best pattern of interaction for a particular purpose. For example, when designing a volume control for a music playback device, the interface may be a dial, slider or buttons. The user experience designer would decide which interface option would work best for the device, taking many factors into consideration. Factors might include: the size of the device. Where the device will be used, the type of person using the device, etc. Building intuitive interfaces is also a key consideration, so that users can learn to use an interface in a minimum of time and with least effort.

Usability is the extent to which a product can be used within a specific context to achieve a goal. Its aim is to improve effectiveness, efficiency and speed of use. Usability can also extend into accessibility — designing products with a short learning curve. Accessibility can also include designing systems for those with disabilities or special needs.

Guidance on approaches to delivery of this unit

It is recommended that the knowledge outcomes are taught in sequence (1, 2, 3 and 4). A suggested distribution of time, across the outcomes, is:

Outcome 1	5 hours
Outcome 2	5 hours
Outcome 3	15 hours
Outcome 4	15 hours

A worked example or case study may be useful as a guide to learners as to the depth and quality required for responses to each outcome. The example should be sufficiently different from the given brief to ensure learners produce their own work and do not simply copy the example.

Outcome 1 requires the analysis of user requirements for an interactive product. A common method of analysis is to produce personas or profiles of typical users of the system.

Personas include some background information about the user, their experience, skills and goals. Personas also include scenarios, explaining how the typical user might use the interactive product. Several personas are usually developed to cover the range of users typically using the system. This is an opportunity for a designer/developer to attempt to view the product from another person's perspective.

Higher National Unit support notes (cont)

Unit title: User Experience Design: Introduction

Outcome 2 requires the development of a high level design for the interactive product. Typically this will involve a structure chart or navigation diagram showing an overview of the structure of the interactive product. User requirements should be taken into consideration when grouping content and features of the product. A typical activity carried out at this stage is 'card sorting', where the main features and content of a proposed product are sorted, by a small set of typical users, into categories that make sense to the user. The designer/developer looks for patterns in the results of this exercise, and constructs the high level design based on this information. Also at this stage several wireframes will be constructed to indicate the proposed layouts of the screens/pages of the product. This is typically low-fidelity, with only placeholder objects used in the wireframes.

Outcome 3 involves the development of a visual design for the product. Commonly, several 'style tiles' will be created at this stage, exemplifying different colour schemes, fonts, layouts, textures and other design elements that could be used in the design of the visual interface. A small set of users will be shown the style tiles and asked to indicate their preferred design elements. This information will be used to create high-fidelity mock-ups of several screens or pages from the interactive product, to provide a clear indication of the look and feel.

Outcome 4 involves the production of a prototype of the interactive product. Prototypes can come in several forms, including paper-prototypes and high-fidelity digital prototypes. Often prototypes are tested by giving testers a particular task to carry out whilst being observed by the designer/developer. The testers are encouraged to voice their thoughts as they use the prototype so that the designer/developer can clearly identify any difficulties the tester has in using the product. These tests are usually video-recorded for later analysis and to identify any changes required to the design of the product.

Guidance on approaches to assessment of this unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

The holistic assessment that integrates assessments for Outcomes 1, 2, 3, and 4 could take the form of a case study. The assessment should be carried out over an extended period.

The learner should be provided with a brief which is sufficient enough to allow the learner to analyse user requirements, design and create a prototype and undertake an evaluation and covers all evidence requirements for Outcomes 1, 2, 3 and 4. The brief must also be sufficient in that it requires the learner to analyse, design, prototype and undertake a usability evaluation.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

Higher National Unit support notes (cont)

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Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the evidence requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

This Unit has the Core Skill of Problem Solving embedded in it. This means that when learners achieve the Unit, their Core Skills profile will also be updated to show they have achieved Problem Solving at SCQF level 5.

History of changes to unit

Version	Description of change	Date
02	Core Skill of Problem Solving at SCQF level 5 embedded.	24/11/2017

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General information for learners

Unit title: User Experience Design: Introduction (SCQF level 7)

This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning and employment.

This unit is designed to provide you with an understanding of user experience design. You will develop skills and knowledge required to undertake the user experience design process, and develop and evaluate a prototype based on your research findings.

User experience design is the process of developing a product with user accessibility, usability and user pleasure in mind. It extends Human Computer Interaction (HCI) by addressing more aspects of the user and product.

User experience design includes visual design, information architecture, interaction design, usability, and iterative design based on evaluative feedback.

On completion of the unit you should be able to:

- ◆ Analyse user requirements for an interactive product.
- ◆ Develop a high level design for an interactive product.
- ◆ Develop a visual design for an interactive product.
- ◆ Evaluate a prototype for an interactive product.

The assessment may take the form of a case study where you will be asked to carry out and record the practical assignment based on a given brief. The assessment will be carried out under open book conditions and over an extended period of time.

This Unit has the Core Skill of Problem Solving embedded in it, so when you achieve this Unit your Core Skills profile will be updated to show that you have achieved Problem Solving at SCQF level 5.

There are also opportunities to develop the Core Skill of *Communication*.