Higher National Unit specification

General information

Unit title: Game Interface Design (SCQF level 7)

Unit code: HH37 34

Superclass: CB

Publication date: November 2016

Source: Scottish Qualifications Authority

Version: 02

Unit purpose

The purpose of this unit is to introduce learners to the concepts of game interface design. Learners will become familiar with game interface features, visual aesthetics, and display elements which allow players to progress within a game. They will also gain an understanding of the influence of diegesis and haptics on the design of game interfaces. Learners will undertake an evaluative investigation of interface designs and then create some visual prototypes.

This unit is intended for those interested in designing interfaces for games for delivery on a variety of platforms. It may also be of interest to learners within the fields of art and design who wish to work in the games industry.

On completion of this unit learners may find *Computer Games: Interaction Design* at SCQF level 8 an appropriate unit to further enhance their knowledge in this area.

Outcomes

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

1 Describe game interface features in game genres.
2 Evaluate the use of interface features in existing computer games of a chosen genre.
3 Use interface features for a game in the chosen genre.

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)

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Recommended entry to the Unit

Access to this Unit is at the discretion of the centre. Experience of playing games of many genres would be beneficial but not essential. It may be beneficial to have completed F8R6 34 *Game Design Theory*.

Core Skills

Achievement of this Unit gives automatic certification of the following Core Skills component:

Complete Core Skill None

Core Skill component Critical Thinking at SCQF level 6

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of 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.

The Assessment Support Pack (ASP) for this unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website **(http://www.sqa.org.uk/sqa/46233.2769.html)**.

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

Describe game interface features in game genres.

Knowledge and/or Skills

- Visual Aesthetics
- Player feedback
- Navigation
- Diegetic and non-diegetic influences
- Meta elements
- Spatial elements
- Haptic influences
- Latest developments in Game UI

Outcome 2

Evaluate the use of interface features in existing computer games of a chosen genre.

Knowledge and/or Skills

- Contextualisation of visual aesthetics
- Genre-specific layout features including viewpoints
- Genre-specific navigation
- Genre-specific player guidance
- Any other features of interest and comparison

Outcome 3

Use interface features for a game in the chosen genre.

Knowledge and/or Skills

- Genre-specific interface requirements
- Application of design techniques
- Design for a target market
- Prototype visual designs
- Justification of interface features

Higher National Unit specification: Statement of standards

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Evidence Requirements for this Unit

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills across all Outcomes.

The evidence for this unit may be written or oral or a combination of these. Evidence may be captured, stored and presented in a range of media (including audio and video) and formats (analogue and digital). Particular consideration should be given to digital formats and the use of multimedia.

The Evidence Requirements for this unit will take two forms:

1 Evidence of cognitive competence (knowledge and understanding) for Outcomes 1 and 2.

2 Evidence of practical competence (practical abilities) for Outcome 3.

For Outcomes 1 and 2, candidates will be required to demonstrate that they will be able to:

- describe the game interface design features specified in Outcome 1 in more than one genre. The assessment will be closed-book. If a traditional test is used, this test should be timed and should be completed in a single assessment occasion ('sitting') and an appropriate pass mark being set. Where reassessment is required, it should contain a different sample from that previously used.
- document, evaluate and compare interfaces within a chosen game genre. This will be a research based open-book assessment, where candidates can annotate their reports with screen captures to highlight key features. Candidates will also formally acknowledge their sources in a reference list.

For Outcome 3, candidates will be required to demonstrate that they will be able to:

- apply design techniques to begin planning a prototype visual interface in the chosen genre.
- define the target market for the game prototype.
- produce a requirements specification document for the game prototype.
- produce at least four visual prototype designs for game interfaces in the chosen genre.
- justify the choices made in the interface elements portrayed.

Evidence for practical competence may be produced over an extended period of time under open-book conditions; but where it is generated without supervision some means of authentication must be carried out.

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: Game Interface Design (SCQF level 7)

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

In this unit learners will be taught about the ways that information can be displayed on the screen for a range of different types (genres) of game. They will be encouraged to research, analyse and investigate one game genre, eg First person shooter, Real Time strategy game or Massively Multiplayer Online Role Playing Game (MMORPG), and compare how different games within this genre make use of interface design elements such as colour, fonts, Heads up Displays, and other features. Learners will then get the chance to design a series of interfaces for a game of a chosen genre.

A game interface has a lot of information to convey within a limited amount of space. A poorly designed interface detracts from the player experience and can cause a good game concept to fail.

The intention of this unit is to develop the learner's knowledge and skills in the design of effective visual user interfaces for games. Since there are a great variety of game genres and platforms for delivery, it would be difficult to cover all aspects of every genre, therefore the learner can choose to research a genre of interest to them, and then produce some visual designs using typical features of the chosen genre.

Outcome 1 is designed to test the learners' knowledge and understanding of game interface elements. Making the game visually pleasing is important along with efficient use of space, player feedback, and ease of navigation. Items such as effective use of colour, typography, layout, icons, heads up displays (HUDs) and viewpoints should all be considered as part of the visual aesthetics. In addition knowledge of how aspects such as diegetic and haptic aspects influence the design of the game interface is included.

In this Outcome, learners will learn from the following:

Visual Aesthetics

- The use and influences of colour on interface design for example, relevant aspects of colour theory such as colour consistency, perception, colour schemes, use of transparency.
- The use of typography in game interface design for example, use of serif, sans serif, contextual fonts, consistency in font use, fonts for visual feedback to the user.
- Factors influencing layout in a variety of genres, for example, the importance of visual consistency.
- Use of textures relative to the games themes and environment.
- Interface changes with viewpoint options.

Higher National Unit Support Notes (cont)

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Player Feedback — Positioning of player feedback tools such as HUDs, maps, navigation aids, screen messages.

Navigation — positioning and visual appeal of menus and icons for interactive components, eg itenary, health, scores, help and cut scenes.

Diegetic influences — Diegetic means 'within the narrative'. These are where the game interface elements are part of the game narrative and the player can interact directly with them thereby reducing the need for external information on the screen. The reduced need for player on screen feedback leaves more space on the interface. Diegetic interfaces allow the player/avatar to exist in the game world and interact directly with it through haptic, (ie touch, motion) audible or visual means. Examples would be:

- The player character being able to see his watch or compass to tell the time or move North.
- The racing car driver (player) can see the speedometer as part of the car environment and not on a HUD.
- Player (Pilot) gets full view of the cockpit and all its instruments without the need for a transparent (HUD) overlay.
- Instead of having a health bar the character begins to limp to indicate that he has been wounded and is decreasing in health, thus removing the need for a health bar on the interface.

Use of diegesis means the game uses in-game indications of things that a tool like the HUD would otherwise indicate to the player.

Non Diegetic influences — This is more common within many game genres. This is where the interface elements are not used directly within the game narrative but are essential to game play progression. This exists in many strategy games. Examples include:

- Health bars displayed onscreen
- Currency and resource indicators and numeric scores and values
- Building or collation of assets necessary to the game are provided with their own overlying clickable interface
- The Heads Up Display (HUD) often semi-transparent for player feedback, directions, navigation
- Tool tip indicators
- Mini maps
- Access to Multiplayer menu options

Spatial influences — these are interface features that provide more information to the player but the character(s) and game world are not aware of them. Examples would be:

- Implementing a boost to currency or asset production to enable more resources to become available to the player, a colour indicator might be used on the interface to remind the player.

- Typed instructions are provided for the player for a short time directly on the interface, the character remains unaware.
- In some strategy games characters can have a coloured aura around them to provide the player with more information.
- Sending messages to the player from the game system, this could be information them that they are getting a bonus or they have unlocked a device that will help them progress within the game.

Meta elements — these are effects that are displayed on the interface and are part of the game narrative, they can be incidental to play, or enhance play and player information. Examples would be:

- A cracked screen affecting player vision.
- Blood spatter affecting the player's vision temporarily.
- The screen fades out or turns a specific colour indicating a decline in player health.

Points of View (POV) — Viewpoints or observation points within a game allow the player to gain more information or plan future moves. Interface features will change depending on whether the player is getting first person view point, third person view, or a bird's eye viewpoint.

Haptic influences — this matches the sense of touch or pressure to the game world and can effect the display of the game, eg controller vibrations of a bomb blast coupled with a shaking screen can provide a more realistic experience.

Developments in gaming technology can lead to new influences on game interfaces. At the time of writing, virtually reality headsets provide a different interface experience with many haptic influences. It is at the discretion of the lecturer what new developments could be discussed as part of the content to include in the objective questions.

The purpose of **Outcome 2** is to enable the learner to study and evaluate existing game interfaces in a single chosen genre and gain valuable knowledge on design techniques commonly used. The learner will research both effective and not so effective techniques of display that are typical of the chosen genre.

Learners will be taught to analyse and evaluate interface features of a chosen genre. Using examples of current games, learners will be taught to compare interface elements within genres for example the teacher may choose to highlight common interface elements of first person shooters and compare games from two popular game franchises such as 'Call of Duty' and 'Medal of Honor'. Likewise with any other genre, choose two or three games and present comparisons. Teachers can stimulate class discussion and opinions about good and not so good use of interface features identified in Outcome 1, for example 'what form does player feedback take and how effective is it?'

The purpose of **Outcome 3** is to allow the learner to apply the knowledge they have gained in the previous Outcomes and design their own set of prototype visual interfaces for a game in the genre they have chosen to research. This Outcome also includes some documentation specifying the use of interface features, and justification for the elements and methods of display they have used for the chosen genre.

Higher National Unit Support Notes (cont)

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Learners will be encouraged to be creative and apply the knowledge they have gained to produce a set of interface designs. Learners will also be instructed in formatting a requirements specification document for their proposed prototype. Designing for a target markets will also be taught and player expectations within that target market.

Suggested future units to progress would be the *Computer Games: Interaction Design* unit and/or *Narrative and Genre in Computer Games* F6B6 35.

This unit relates to the following National Occupational Standards:

National Occupational Standards: Interactive Media and Computer Games Standards published by Skillset, the Sector Skills Council for Creative Media (Feb 2013).

- IM5 Design Interactive Media Products
- IM6 Design Electronic Games
- IM7 Design User Interfaces for Interactive Media Products
- IM8 Determine the Implementation of Designs for Interactive Media Products
- IM9 Plan Content for Interactive Media Products

Guidance on approaches to delivery of this Unit

The Outcomes could be taught in any order, or in a holistic way; it may be preferable to formally assess Outcome 1 near to the end of delivery as the learner will gain knowledge and skills as they develop their practical and theoretical work for Outcomes 2 and 3.

Lecturers can cover all of the Knowledge and Skills for Outcome 1 using case study examples of existing games, and covering two or three of the most popular genres. Interface features for a strategy game will be very different to those of interface features in a shooting or sports genre. Lecturers can highlight a few examples and techniques using current popular games some of which will be better than others. Learners should be encouraged to research game interfaces and discuss findings, therefore working in small groups would be beneficial to cover a variety of game genres and share their knowledge, information and opinions. Classroom discussions, peer presentations, YouTube videos of game play along with internet, magazine and game resources should all be used.

A learner-centred approach could be used for Outcome 2 where the lecturer encourages the individual learner to investigate a range of games within a chosen genre. The learner could keep an e-notebook or blog of the effectiveness of interface features of a chosen genre. Guidance should be given in the form of lectures and classroom discussions to encourage comparative evaluation skills and report writing.

Outcome 3 has a more practical based approach where sufficient time should be given to develop the visual prototypes. This Outcome should take about 12–14 hours to complete. The lecturer could demonstrate the use of any relevant software, tools and techniques that could be used to develop the visual prototypes. It may be beneficial to deliver this unit alongside or after an image editing unit where the learners would already have developed skills to produce the visuals. An exemplar of the format of the requirements specification document could be provided by the lecturer along with useful hyperlinks or lesson tutorials to assist in producing this work. This Outcome demands more time than the previous two

Higher National Unit Support Notes (cont)

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Outcomes as the learner is producing a small portfolio of work based on the knowledge and understanding they have gained as a result of teacher input and their own investigation.

Finally discussion of work produced to encourage self-evaluation and critical analysis should be encouraged this can be done on an individual basis by the lecturer or it may be more beneficial to work with peers, in pairs or small groups to provide feedback on each other's work. There may be opportunities to deliver the content of this unit alongside other appropriate units, or to use a common brief, thus saving time and avoiding repetition.

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 candidates.

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

This unit is assessed best using three separate assessment instruments. However if a different approach is taken the assessments could be integrated into one holistic version.

- Outcome 1 may be assessed by a set of 20 objective questions sampled from the knowledge and skills within Outcome 1. This assessment will be closed-book with a pass mark of 60%.
- Outcome 2 may be assessed by a case study presentation where the candidate has undertaken research on two or three games within a chosen genre and has identified typical features, and compared and evaluated the effectiveness of these interface features. This could take the form of a written report, electronic presentation, wiki, or any other suitable format.
- Outcome 3 may be assessed by the production of a small design portfolio for a game in the genre chosen as part of the research undertaken in Outcome 2. It is expected that the portfolio will consist of the following:
  - A set of at least four interface designs in the form of a visual prototype.
  - Mood board or storyboard or flowchart or any other appropriate design technique.
  - A requirements specification for the proposed prototype.
  - A short evaluation report of around 500 words defining the target market and justifying the choices made in the visual prototype.

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**.

Higher National Unit Support Notes (cont)

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Opportunities for developing Core and other essential skills

There are opportunities to develop the Core Skills of *Problem Solving* and *Information and Communication Technology (ICT)* at SCQF level 6 since learners will be creating, analysing and designing game interfaces.

This Unit has the Critical Thinking component 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 Critical Thinking at SCQF level 6.

Opportunities for developing Computational thinking

There are opportunities to develop aspects of computational thinking throughout this unit. Learners are expected to analyse and design game interfaces. This involves skills in analysis and recognition of common features. They are presented with a task and in order to accomplish it they will break it down into a series of smaller tasks.

History of changes to Unit

Version	Description of change	Date
02	Core Skills Component Critical Thinking at SCQF level 6 embedded.	27/02/17

General information for learners

Unit title: Game Interface Design (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.

In this unit you will learn about game interface design. A game interface has a lot of information to convey within a limited amount of space. A poorly designed interface detracts from the player experience and can cause a good game concept to fail.

You will learn about the ways that information can be displayed on the screen for a range of different types (genres) of game. You will research, analyse and investigate one game genre, eg First person shooter, Real Time strategy game or Massively Multiplayer Online Role Playing Game (MMORPG). You will compare how different games within this genre make use of interface design elements such as colour, fonts, Heads up Displays, and other features. Then you will get the chance to design a series of interfaces for a game of your chosen genre.

The assessments in this unit will cover both theoretical and practical aspects of designing game interfaces.

This is a unit where there is mixture of theory and practical work and it will provide you with knowledge that you can use as a foundation for further study into game genres, interaction design and other game projects on this course.

There are opportunities to develop the Core Skills of *Problem Solving* and *Information and Communication Technology (ICT)* at SCQF level 6 since you will be creating, analysing and designing game interfaces.

This Unit has the Critical Thinking component of Problem Solving embedded in it. This means that when you achieve the Unit, your Core Skills profile will also be updated to show you have achieved Critical Thinking at SCQF level 6.