

# Unit 62: Digital Video Production for Interactive Media

<b>Unit code:</b>	<b>T/502/5674</b>
<b>QCF Level 3:</b>	<b>BTEC National</b>
<b>Credit value:</b>	<b>10</b>
<b>Guided learning hours:</b>	<b>60</b>

## ● Aim and purpose

The aim of this unit is to introduce learners to the production and use of digital video material for an interactive media product. Learners will investigate how video is used in interactive media products and will examine the technology used to produce and manipulate digital video sequences. Learners will plan and create a video sequence and prepare it for use within an interactive media product.

## ● Unit introduction

Moving images are no longer restricted to the cinema and TV. Changes in technology mean that people expect to be able to watch and share movies online and on the move. Digital video is now a common element of websites, viral advertising and digital presentations. Mobile devices carry increasingly sophisticated technology for shooting, sharing and playing moving images. Video sharing platforms have transformed media consumption patterns and they contain a huge variety of video content from independent creators as well as moving image adverts. In short, video in interactive media is everywhere. The implication for interactive media producers is that their work is converging with that of traditional film and video producers, but with an added requirement to implement this through current digital media technologies. This presents some new challenges for learners, including the technological requirements of this proliferation of platforms.

This unit begins with investigations into video in interactive media, enabling learners to understand both the uses and the technologies. Learners will then plan a digital video project, generating ideas, making decisions about content, storyboarding, editing, and producing digital video material for use in an interactive media context.

Learners can use this unit to gain experience of producing digital video material and preparing it for incorporation in an interactive media product. Exporting the edited video using the appropriate compression and file format is crucial to its functionality on particular platforms.

## ● Learning outcomes

### On completion of this unit a learner should:

- 1 Understand principles of digital video technology in interactive media
- 2 Be able to devise a digital video sequence for use in an interactive media product
- 3 Be able to shoot and source digital video assets for use in an interactive media product
- 4 Be able to create a digital video sequence for use in an interactive media product following industry practice.

# Unit content

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## 1 Understand principles of digital video technology in interactive media

*Applications:* uses, eg short films, promotional material, film trailers, user-generated content, viral marketing, advertising, virtual reality tours, games, e-learning; platforms, eg online, kiosks, presentations, mobile devices; video sharing platforms

*Technology:* digital video capture; compression (lossy, lossless); digital video file formats; streaming methods (downloading, progressive downloading, streaming); data transfer rate; file size (resolution, data rate, frame rate, key frame rate, compressor, audio settings); aspect ratios; digital rights management (DRM)

## 2 Be able to devise a digital video sequence for an interactive media product

*Stimulus:* eg client brief, own brief, from market research

*Ideas:* brainstorming; visualisation (sketches, storyboard; concept, eg script)

*Legal and ethical considerations:* legal, eg copyright, libel; ethical, eg accessibility, confidentiality, decency; representation, eg race, gender, religion, sexuality

*Video sequence specification:* client needs; audience; script; storyboard; technical considerations, eg platform, file format, file size, compression, streaming method, platform

## 3 Be able to shoot and source digital video assets for use in an interactive media product

*Plan:* workflow (scheduling, efficient time management); deadlines (production milestones, deliverables, quality assurance)

*Shoot video assets:* shot quality (lighting, focus, depth of field, colour balance, exposure); shot composition (camera angle, framing)

*Source video assets:* eg video library, online, broadcast, client, peers, tutor

#### 4 Be able to create a digital video sequence for use in an interactive media product following industry practice

*Asset management:* importing (shot video, sourced video, graphics, audio); organising (file storage and retrieval, naming conventions)

*Post-production software techniques:* workspace, eg browser/project window, timeline window, toolbox window, effects tab, audio mixer tab; creating a new project; importing; editing decisions (logging, edit decision lists, editing to sound, editing for continuity, creating narrative flow), editing clips (trimming clips, three point editing, rolling and ripple edits); transitions (transition setting, adding, editing); creating a still image sequence; colour correction; video effects; audio (editing, gain, fade); titles (static, rolling); colour-separation overlay; compositing

*Exporting digital video for interactive media products:* platforms, eg online, kiosks, presentations, mobile devices, video sharing platforms; compression; digital video file formats; streaming method, eg downloading, progressive downloading, streaming; data transfer rate; file size, eg resolution, data rate, frame rate, key frame rate, compressor, audio settings; aspect ratios

*Industry practice:* reflect on finished product (compared with original intentions, fitness for purpose, technical qualities); production skills (ideas generation, video sequence specification, workflow and time management, technical competence, teamwork)

## Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
<b>P1</b> summarise accurately the principles of digital video technology in interactive media using some subject terminology appropriately	<b>M1</b> explain the principles of digital video technology in interactive media with reference to detailed illustrative examples and with generally correct use of subject terminology	<b>D1</b> comprehensively explain the principles of digital video technology in interactive media with elucidated examples and consistently using subject terminology correctly
<b>P2</b> generate outline ideas for a digital video sequence working within appropriate conventions and with some assistance [CT; SM]	<b>M2</b> generate detailed ideas for a digital video sequence showing some imagination and with only occasional assistance	<b>D2</b> generate thoroughly thought-through ideas for a digital video sequence showing creativity and flair and working independently to professional expectations
<b>P3</b> generate digital video assets with some assistance [SM]	<b>M3</b> generate digital video assets competently with only occasional assistance	<b>D3</b> generate digital video assets to near-professional standards working independently to professional expectations
<b>P4</b> create a digital video sequence for use in an interactive media product following industry practice, working within appropriate conventions and with some assistance. [CT; SM; RL]	<b>M4</b> create a digital video sequence for use in an interactive media product working to a good technical standard following industry practice, showing some imagination and with only occasional assistance.	<b>D4</b> create a digital video sequence for use in an interactive media product working to near-professional standards following industry practice, showing creativity and flair and working independently to professional expectations.

**PLTS:** This summary references where applicable, in the square brackets, the elements of the personal, learning and thinking skills applicable in the pass criteria. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

<b>Key</b>	IE – independent enquirers	RL – reflective learners	SM – self-managers
	CT – creative thinkers	TW – team workers	EP – effective participators

## Essential guidance for tutors

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### Delivery

This unit is intended to develop learners' understanding of practical applications of digital video in interactive media. This unit is best taught through demonstration, discussion, practical projects and visits from practitioners. Learners should be encouraged to experiment with a range of digital video editing software techniques.

Learners should understand how video material can be incorporated into interactive media applications. Existing products should be examined to consider technical issues related to the chosen platform. Learners should consider how and why they would use video in interactive media and the implications of video compression on the quality of picture and sound. They should consider the purpose of the video and the needs of the target audience.

Learners need to understand that much of the hard work developing an effective video clip happens long before they begin filming. They should rough out their ideas for the subject matter of the clip. This can be done effectively through developing their ideas using storyboards describing the most important steps in the process. Through the production of a script learners should expand detail about the video action and subject matter for any narration (voiceover) that is required or dialogue between characters identified in the storyboarding activity.

They should make note of information relating to the filming, such as camera angles and effects (pan, zoom etc). Specifically, they should identify any event that might require a change in camera angle or setup.

Learners will shoot video material in this unit as the raw material for editing. They may also use found footage from broadcast or other sources (subject to relevant copyright clearance or permission). Learners must use industry-standard video editing software to edit and produce digital video for an interactive media product. They should understand how edited material can be exported for interactive media applications.

Critical self-reflective practice is important to all creatives, and is an important personal professional tool.

Learners should be encouraged at every opportunity to record their evaluative comments for future reflection and for personal development. Reflections could be noted in personal logs, blogs or vlogs.

## Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan demonstrates one way of planning the teaching and assessment of this unit.

Topics and suggested assignments and activities
Introduction to unit and unit assessment.
Introduction to digital video technology in interactive media products. Learners: <ul style="list-style-type: none"><li>• attend lectures, discussions and demonstrations to examine how video is used in an interactive media product</li><li>• attend lectures, discussions and demonstrations to examine the types of platforms used by interactive media products</li><li>• attend lectures and hold discussions to explain digital video technology</li><li>• analyse the technology used to create and deliver digital video via interactive media platforms, making notes and discussing observations.</li></ul>
<b>Assignment 1 – Video for Interactive Media: What You Need to Know</b> Learners will write an article on how designers use digital video technology to enhance a user's interactive experience on different delivery platforms for an online media ezine. The article must cover: <ul style="list-style-type: none"><li>• applications</li><li>• technology as relevant to each application.</li></ul>
Introduction to and review of ideas generation and recording.
<b>Assignment 2 – Video for College Website</b> <b>Part 1</b> Working individually to a brief from the college management learners will generate ideas for a video sequence for the college website. Learners will: <ul style="list-style-type: none"><li>• consider and interpret a creative brief</li><li>• generate and record ideas</li><li>• carry out pre-production planning</li><li>• compile a comprehensive development log evidencing their creative work.</li></ul>
Workshop sessions on development of practical skills to create video assets by: <ul style="list-style-type: none"><li>• formal brief introductory lecture at commencement of sessions covering skills to be developed in session and covering:<ul style="list-style-type: none"><li>◊ production processes</li><li>◊ digital video recording equipment</li><li>◊ production workflow and management processes.</li></ul></li></ul>

## Topics and suggested assignments and activities

### Assignment 2

#### Part 2

Learners will create and source digital video assets for the college website.

Learners will:

- undertake production workshop sessions following their planned ideas and specification
- present work including management of own interactive media production work.

Introduction to digital post-production techniques applied to digital video for an interactive product by:

- using digital video editing software tools
- production process and technical considerations
- presentation of work including own digital video work
- considering technical qualities and fitness for purpose of own digital video work.

### Assignment 2

#### Part 3

Learners will create a digital video sequence using generated and sourced assets from Part 2 of this assignment.

Learners will:

- complete digital video sequence production work
- review their own digital video sequence production work.

Unit learning and assessment review.

## Assessment

### Evidence for assessment

Evidence for the achievement of learning outcome 1 could be in the form of an electronic presentation, report, blog or vlog. Presentations must be recorded for the purposes of internal and external verification.

Achievement of learning outcomes 2 and 3 will most likely be evidenced by the learner's planning for, and management of, the creation of digital video material for an interactive media product. This could be shown through notes on the creative process, including storyboards and scripts, and the planning process, including schedules and asset lists.

For learning outcome 4, learners must be provided with an interactive media product containing placeholders for the insertion of their edited and sourced digital video sequences; this can be either a product they have created in another unit or one provided by the tutor. Evidence for the achievement of learning outcome 4 will be the final video material integrated into the interactive media product, with any associated post-production documentation. This could be supplemented through notes and observation of software use.

Learners should test the fitness for purpose of their digital video production through reflective practice, comparing the finished edited and integrated digital video sequence with their original intentions. Reflection by client, peers and target audience, and notes from tests for technical functionality on the relevant platforms may also be used as evidence for learning outcome 4.



For some elements of this unit, and for some learners, a formal viva voce assessment might be appropriate. When more than one learner in a cohort is assessed in this way, care must be taken to ensure that all learners are asked equivalent questions, and that all are given equal opportunities to expand or clarify their answers. Interviewers must also ensure that questions are not phrased in such a way as to provide or suggest an answer. Formal vivas should be recorded for the purposes of internal and external verification and at least 50 per cent of such assessments must be internally verified.

## **Application of grading criteria**

When applying the grading criteria tutors should follow the advice given below. Please note that any examples of evidence given here are indicative only. This advice is not inclusive and the examples need not be included in a learner's work in order for that learner to achieve the exemplified grade. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

### **Pass**

To achieve a pass grade, learners must achieve all the criteria at pass level. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

P1: learners will accurately explain the uses of video in interactive media. They will accurately identify the possible technical issues when using a digital video sequence on different delivery platforms and the different technical issues related to file formats and file size. Evidence will show a basic understanding of technical terminology but learners will generally be unsure about this vocabulary and will make fairly frequent mistakes when they do use it. Learners will also recognise principles and reasons for the use of video sequences in interactive media products. Learners will demonstrate their understanding by distinguishing correctly between, for example, film trailers, advertising and user-generated content online. However, they may not, for example, be able to explain why a particular delivery platform might be used as opposed to another.

P2 and P3: learners will plan and shoot a video sequence in simple and conventional ways. There will be limited evidence of the development process, project management, monitoring and review of shot quality and shot composition, such as basic storyboards, scripts, and asset lists. The proposal will be basic but sufficient to indicate intended purpose and medium of delivery of the digital video sequence including a basic outline indicating the target audience; however, learners' intentions and decisions will not be fully developed. Evidence of their production process will demonstrate some appropriate production management processes. They will have provided the sourced digital video material and shot digital video material.

P4: learners will use video post-production software techniques at a basic level to produce a digital video sequence for integration into an interactive media product. There will be technical faults, and edit decisions may reflect inappropriate selection and unsophisticated sequencing of shots. The finished digital video sequence will show basic production values, but will be appropriate to its purpose and target audience. The exported video will reflect a limited understanding of compression and choice of file types for the medium of delivery. The outcome will demonstrate some evaluation of work, in order to develop it in line with the requirements of the brief.

P2, P3 and P4: in all practical activities learners will need frequent assistance and support, though they will take note of and make use of this help when it is given. If they are in frequent need of such help but fail to make positive use of it, they should not be considered for a pass grade for this unit.

## Merit

To achieve a merit grade, learners must achieve all the pass and all the merit grade criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

M1: learners will explain the uses of video in interactive media through examples that they have chosen to reflect a good range of technologies and uses. They will discuss technical issues such as delivery platform, file formats and file size using subject terminology widely and accurately. They will also discuss the principles of use of video sequences in interactive media products, for example, film trails, advertising and user-generated content online, and why a particular delivery platform might be used as its delivery medium. Learners will use technical vocabulary for the most part correctly, but may make mistakes or be unsure about usage at times.

M2 and M3: learners will plan and shoot a video sequence which combines the key characteristics of video in interactive media in an imaginative way, making use of conventions but not slavishly copying them, and reflecting in their work showing an understanding of the form and the technology. There will be evidence of the development process, project management, monitoring and review, such as carefully prepared storyboards, detailed asset lists, action plans and evaluations. The proposal will be appropriate for purpose and target audience and decisions will be justified. Learners will show facility and some confidence in relation to skills and the handling of equipment. Work will be approached methodically and with adequate preparation. Pre-production and production paperwork will be sound.

M4: learners will use video post-production software techniques effectively to produce a piece of digital video in which they will still be working within recognisable generic conventions, but there will be some imaginative thought behind the work so that technical skills and codes and conventions will be employed with some inventiveness. At merit grade, production values will be generally high, which means that there should be few technical shortcomings and edit decisions will reflect an appropriate selection and sequencing of shots. The finished digital video piece will be appropriate to its purpose and target audience. The exported video will reflect a good understanding of compression and file types.

M2, M3 and M4: when engaged in practical activities, learners will need occasional support, particularly when dealing with more complex technology or trying to apply more sophisticated techniques. As with the pass grade learner, they will benefit from any help given.

## Distinction

To achieve a distinction grade, learners must achieve all the pass, all the merit and all the distinction grade criteria. For each of the criteria learners must present evidence that addresses each italicised sub-heading of the content for the learning outcome.

D1: learners will analyse in depth the characteristics of existing video in interactive media through examples that they have chosen to reflect a broad range of principles, technologies and usages. They will critically evaluate technical issues such as delivery platform, compression, file type and file size, using specific aspects of their examples to justify their points. For example, comparisons of differently compressed movies can lead to conclusions about balancing file size against quality for web delivery. Learners will also justify all ideas and points made about the purpose of their chosen examples, using a close analysis of specific aspects of these movies to illustrate each point. For example, a comparative analysis of the speed and style of editing in a film trail and a short film can lead to conclusions about how aesthetic decision taking is dictated by purpose and audience. Technical vocabulary will be secure and used correctly and confidently at all times.

D2 and D3: learners will produce a plan which combines the key characteristics of video in interactive media in a sophisticated way, reflecting a sound understanding of the form and the technology. There will be strong evidence of the development process, project management, monitoring and review. Documentation such as storyboards, asset lists, action plans and evaluations will be of a quality that is beginning to approach professional standards. Learners will show initiative by, for example, testing their product on a range of appropriate platforms and audiences, noting any problems and making the appropriate changes and improvements in response to the testing feedback. The proposal will be a creative response to the brief and will reflect professional practices. Learners will apply their technical skills not just with imagination but with ingenuity and even elegance, and codes and conventions will be used with occasionally surprising results. Pre-production and production paperwork will be extensive and fully justified.

D4: learners will use video post-production software techniques to near-professional standards to produce a creatively original piece of digital video. Production values will be consistently high and approaching professional levels, which means that there will be almost no technical faults. Edit decisions will show sophisticated selection and sequencing of shots. The finished digital video piece will be highly relevant to its purpose and target audience whilst answering the brief with creative flair. The exported video will reflect a sophisticated understanding of compression and file types.

D2, D3 and D4: in all practical activity learners will be capable of working autonomously and effectively. The term 'working independently' means that they are able to work on their own initiative, do not need constant support or supervision, give the work their full commitment, work positively and cooperatively with others, and meet deadlines. In other words, they have the kind of self-management skills that would be expected of them in a professional context. Note also that this criterion should not be taken to mean that learners do not seek advice or that they work without discussing things with their tutor, but rather that they are not dependent upon the support of others and that, if they take advice, they weigh it carefully for themselves.

## Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Pearson assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, M1, D1	Assignment 1 – Video for Interactive Media: What You Need to Know	Contribution to online media ezine – article on use of video in interactive media.	<ul style="list-style-type: none"> <li>All preparatory notes.</li> <li>Report document as word-processed or electronic presentation.</li> </ul>
P2, M2, D2	Assignment 2 – Video for College Promotional Interactive CD, part 1	Brief from college management to create video sequence for the college website.	Development log containing: <ul style="list-style-type: none"> <li>all ideas notes, storyboards, scripts</li> <li>video specifications</li> <li>proposal outline</li> <li>planning notes.</li> </ul>
P3, M3, D3	Assignment 2, part 2	As above.	Project portfolio containing: <ul style="list-style-type: none"> <li>unedited digital video</li> <li>existing digital video</li> <li>development log</li> <li>all production documentation.</li> </ul>
P4, M4, D4	Assignment 2, part 3	As above.	Project portfolio containing: <ul style="list-style-type: none"> <li>edited digital video integrated into website</li> <li>development log</li> <li>personal reflective comment.</li> </ul>

## Links to other BTEC units

This unit forms part of the BTEC Creative Media Production suite. This unit has particular links with the following units in the BTEC Creative Media Production suite:

Level 2	Level 3
	2D Animation Production
	3D Animation
	Advertisement Production for Television
	Designing Idents for Television
	Film and Video Editing Techniques
	Music Video Production
	Producing Video Installation Work
	Single Camera Techniques
	Stop Motion Animation Production
	Understanding Video Technology

## Essential resources

Learners will need access to appropriate hardware and software of industry standard. Learners should also have access to relevant software manufacturers' manuals, textbooks, the internet and a range of examples of current interactive media video practice.

Learners must be provided with an interactive media product containing placeholders for the insertion of their edited and sourced digital video sequences: either one they have created in another unit or one provided by the tutor.

## Employer engagement and vocational contexts

Centres should develop links with local interactive media production studios which could be approached to provide visiting speakers, study visits or samples of typical products.

ScreenSkills, the Sector Skills Council for the creative media sector, has a substantial section of its website dedicated to careers, including job descriptions.

## Delivery of personal, learning and thinking skills

The table below identifies the opportunities for personal, learning and thinking skills (PLTS) that have been included within the pass assessment criteria of this unit.

Skill	When learners are ...
<b>Creative thinkers</b>	generating ideas for a digital video to be used in an interactive context trying out different ways of creating their digital video sequence, following ideas through to complete a finished video sequence adapting their ideas as circumstances change
<b>Reflective learners</b>	reviewing and reflecting on their digital video work and acting on the outcomes to modify and improve their work setting goals with success criteria for their production work inviting feedback on their own work and dealing positively with praise, setbacks and criticism evaluating their learning and experience to inform future progress
<b>Self-managers</b>	producing a digital video to be used in an interactive context seeking out challenges or new responsibilities and showing flexibility when circumstances change dealing with competing pressures, including personal and work-related demands responding positively to change, seeking advice and support when needed.

Although PLTS are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
<b>Independent enquirers</b>	carrying out research into principles of digital video technology and its application carrying out research to develop ideas for their own digital video sequence
<b>Team workers</b>	if working in a group to produce digital video sequence, taking responsibility for their own role managing their personal contribution to and assimilating information from others in discussions to reach agreements and achieve results.

## ● Functional Skills – Level 2

Skill	When learners are ...
<b>ICT – Use ICT systems</b>	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	handling digital video systems to produce their video sequence for an interactive media product
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	planning for the production of a video sequence for a media product
Manage information storage to enable efficient retrieval	managing assets sourced and created for their video sequence
Follow and understand the need for safety and security practices	handling digital video systems to produce their video sequence for an interactive media product
Troubleshoot	handling digital video systems to produce their video sequence for an interactive media product
<b>ICT – Find and select information</b>	
Select and use a variety of sources of information independently for a complex task	sourcing assets for their video sequence for an interactive media product
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	researching asset types and their limitations for use with digital video systems tools
<b>ICT – Develop, present and communicate information</b>	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> <li>• text and tables</li> <li>• images</li> <li>• numbers</li> <li>• records</li> </ul>	building and presenting their project portfolio showing their interpretation of their brief and their generation of ideas, documenting the management of their chosen assets, considering legal implications and reviewing their own work
Bring together information to suit content and purpose	
Present information in ways that are fit for purpose and audience	
Evaluate the selection and use of ICT tools and facilities used to present information	preparing a report on digital video production tools
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	gathering feedback on their digital video production as part of their self-reflective practice

Skill	When learners are ...
<b>Mathematics</b>	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	using estimation and calculation to work out timings for editing of sound or video clips for integration into their product
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
<b>English</b>	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	taking part in brainstorming sessions to generate ideas as a response to a creative brief
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	studying manufacturers’ manuals to research digital video production software
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	creating their project portfolio incorporating ideas, notes, production documentation and reflective comment.