Unit 71: Soundtrack Production for the Moving Image

Unit code: H/502/5699

QCF Level 3: BTEC National

Credit value: 10

Guided learning hours: 60

● Aim and purpose

This unit aims to develop learners' understanding of the relationship between sound and picture in moving image production, and the skills needed to produce moving image soundtracks through acquiring original sound, using existing audio resources and operating post-production software.

● Unit introduction

Sound plays a central role in moving image productions, whether they are multi-million pound projects such as action movies and glossy heritage dramas for television, or small-scale, low-budget creations such as animations produced for the art-house circuit or websites. People working in moving image production have long been aware that the soundtrack enhances the visual image by helping to create meaning, mood and illusion and, as such, is an integral part of audio-visual communication with audiences.

This unit recognises the range of practices, techniques and levels of specialisation within moving image production and specifically addresses the skills required by individuals operating in a digital video production context, where crew members are required to be multi-skilled. This is distinct from the more specialist approach found within productions with higher crewing levels.

The unit is designed to develop the skills needed for the production of soundtracks for video or film projects. It addresses a range of recording and post-production skills at a level appropriate for learners involved in such production. However, it can also provide a broad base for learners following a more specialist audio pathway.

The scope of the unit includes the study of soundtracks and the techniques used to produce them. These techniques can be identified as acquiring original sound, using existing audio resources and combining them using post-production software.

Learners will study techniques in sound recording for video and film in studio and on location, with the aim of producing high-quality audio material. Those working in an area of the media which involves recording audio will need to know how to use appropriate equipment (including microphones), understand the issues around recording environments and be able to follow existing professional practices for recording music, the spoken word and effects. Learners will also cover the issue of copyright law relating to published music, library music and audio effects.

The use of audio editing software is no longer the domain of the specialist and this wider usage is reflected in the unit.

● Learning outcomes

On completion of this unit a learner should:

1   Understand the relationships between sound and picture in moving image productions

2   Be able to record audio for moving image

3   Be able to devise a soundtrack for a moving image project

4   Be able to produce a soundtrack for a moving image project.

Unit content

1 Understand the relationships between sound and picture in moving image productions

Moving image: film; television; web; hand-held devices; video; animation

Audio components: studio and location; interviews; presentation; voiceover; drama dialogue; ambient sound; music; sound effects (SFX); stationary and moving sound sources; use of presence; dubbing eg Automated Dialogue Replacement (ADR)

Relationship between sound and picture: diegetic; non-diegetic; external diegetic; mood; meaning; illusion

2 Be able to record audio for moving image

Environments: studio and location sound formats; mixing live sound; acoustic interference

Equipment: selection; configuration and operation (studio, inside, outside, on location); video; digital; from single sources; from multiple sources

Microphones: selection; handling; positioning for different environments (indoor, outdoor and studio)

Connecting audio: awareness of talk-back; headphones; recognising and applying cabling connections

Monitor and control: monitoring and controlling of recording levels via peak program meters (PPMs) and volume units meters (VUMs); fundamentals of decibels (dBs)

Synchronisation: timecode use; SMPTE

Content: dialogue eg individuals, groups, crowds; music, eg solo, ensemble, vocal, instrumental; location, eg background animate, background inanimate, wildtrack; SFX

Documentation and storage: marking; storing and archiving of all types of sound recording media; logging tracks and timing; log soundtracks from video and audio rushes using time-code and control track

3 Be able to devise a soundtrack for a moving image project

Professional practice: working with a director; working to a brief; working with a studio crew; working with a location crew; meeting audience requirements in relation to issues of taste and decency

Components: dialogue; recorded music; pre-recorded music; SFX, eg pre-recorded, public domain, creative commons, licensed, own; library eg audio CD, CD ROM, internet, public domain, licensed material

Planning: capabilities of the available locations; recording equipment; software; recognition of various audio formats and their compatibility; copyrights; documentation

Intellectual property: public domain; internet downloading; licensed music; licensed SFX; Mechanical Copyright Protection Society-Performing Rights Society Alliance (MCPS-PRS)

4 Be able to produce a soundtrack for a moving image project

Professional practice: working with a director; requirements of client; requirements of audience

Creativity: using audio track to complement the visual content of a production (speech, music, ambient sound, SFX)

Edit sound to picture: locking sound and vision (synchronisation); lip synchronising; split edits; use of timecode; adding music or background atmosphere; laying off and laying back tracks

Sound processing and enhancement: use of digital effect generators or synthesisers

Mixing and dubbing sound sources: level setting; equalisation; mixing dialogue; music and effects; using appropriate compression

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:
P1 describe the relationships between components of sound and picture with some appropriate use of subject terminology	**M1** explain the relationships between components of sound and picture with reference to detailed illustrative examples and with generally correct use of subject terminology	**D1** comprehensively explain the relationships between components of sound and picture with reference to elucidated examples and consistently using subject terminology correctly
P2 produce recorded audio material for moving image with some assistance	**M2** produce audio recordings for moving image to a good technical standard with only occasional assistance	**D2** produce audio recordings for moving image to a technical quality which reflects near-professional standards and working independently to professional expectations
P3 generate outline plans for the production of a soundtrack for a moving image project working within appropriate conventions and with some assistance [CT]	**M3** generate detailed designs for the production of a soundtrack for a moving image project showing some imagination and with only occasional assistance	**D3** produce thoroughly thought-through designs for the production of a soundtrack for a moving image project showing creativity and flair and working independently to professional expectations
P4 apply audio recording and editing techniques to produce a soundtrack for a moving image project with some assistance. [TW]	**M4** apply audio recording and editing techniques to produce a soundtrack for a moving image project to a good technical standard and with only occasional assistance.	**D4** apply audio recording and editing techniques to produce a soundtrack for a moving image project to a technical quality which reflects near-professional standards 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.

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

Essential guidance for tutors

Delivery

This unit requires a significant production element which should be based on a programme of training in which learners acquire the skills to make their own audio material. This should be supported and informed by a study of existing soundtracks.

Learners will benefit from an opportunity to listen to and evaluate pre-recorded sound effects. A valuable activity might be to offer learners the chance to identify mood, tone and pace in a piece of unfamiliar music and, in the role of audience members, to link it to specific contexts or genres.

Close study of the soundtrack in a range of moving image sequences is likely to be beneficial. Here, learners can identify specific audio tracks and how they work with the images on screen. Learners at this point could be introduced to the terms diegetic, non-diegetic and external diegetic sound.

Following this, learners can then work on an exercise which involves responding to a brief to record a number of sound effects under given headings. This will develop skills in the use of relevant recording equipment and techniques and also offer a chance to reflect on how sound signifies meaning to an audience.

In preparation for a production assignment, learners will need to be made familiar with the professional sequence of activity in planning, recording and processing sound for a video production. They will need also to learn about the relevant documentation and practices used in storing and logging material. The concept of a plan or design for the soundtrack of a video production could be introduced here. If they are to be able to work effectively in the industry it is essential that learners are introduced to the 'jargon' of post-production. An understanding of the language used in post-production studios, and the roles of people working in the industry, will lead to a greater understanding of the process.

Workshop sessions should cover the practical process including choice, care, position and function of various types of microphone and their connections to a recording unit. Compression, quality and timecode issues will also be significant, as will the protocols of studio and location practice.

Basic acoustics should be covered in sufficient detail for learners to identify the properties of various locations and the risk of audio interference. Learners should be given opportunities to practise planning and making exterior and interior location recordings of dialogue, effects and wild tracks. Studio recording at a basic level should also be part of the preparatory activities and this might include recording an interview, discussion or piece of music in performance.

Understanding of directional cue positions in relation to SMPTE timecode locations and offset values needs to be demonstrated using actual visual footage and must not just be studied in theory. The emphasis is on the creation, development and final procedures leading to the production of a finished product as outlined in a brief.

At this stage, learners may well require training in the use of the audio editing application they will use in an assignment, addressing not simply its functions but also the effects of using those functions.

Assignment briefs can form part of a moving image project in which assessment for a number of units will be combined. Here, a learner will take responsibility for the soundtrack of a group project in which they have an audio role at the production and post-production stages. Another option would be for learners to produce the soundtrack for an individual project such as an animation (either their own or another learner's).

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.
Class discussion, listening to pre-recorded examples and identifying techniques used for purposes, mood, and genre.
Tutorial: breakdown and analysis of specific sequences in film and TV productions.
Assignment 1: Sound and Picture Learners will complete an independent study of the relationship between sound and vision recording their findings in the form of a video diary.
Workshops and exercises: • use of microphones • use of audio and video recording equipment • producing and recording sound experiments.
Professional practice workshops: • recording dialogue on location • recording dialogue in studio.
Exercise: recording sound. Learners will record a number of specified sounds for a script using a range of equipment.
Professional practice post-production workshops and exercises: • mixing • dubbing • working with multiple soundtracks.
Illustrated talk: intellectual property, library music, obtaining clearances.
Exercise: soundtrack planning and production. Learners will devise and produce a soundtrack for a two-minute piece of moving image footage using only naturally recorded sound.
Assignment 2: Commission Learners will take a sound design and mixing role in a moving image production being made by other learners in connection with another unit. They will: • devise the soundtrack • record all necessary sound • produce the final soundtrack. As well as the final production, learners will submit a production file containing all pre-production and post-production paperwork.

Assessment

Evidence for assessment

For the assessment of learner outcome 1, learners might describe two examples of soundtracks from existing film or TV productions either in a written piece of work with audio and graphic examples or a presentation illustrated with clips. Presentations must be recorded for the purposes of internal and external verification.

For the assessment of learning outcome 2 recordings should exemplify use of different recording and mixing equipment. Reports can be in the form of logs, portfolios or blogs, which should contain evidence of how the recordings were planned and executed. Evidence could include track sheets, pre-production planning schedules, and studio and equipment booking procedures. Reports, presentations and references to articles in trade journals might also be suitable assessment vehicles. Innovative approaches might be chosen, for example to provide content for a CD ROM or website designed for training and learning purposes.

For the assessment of learning outcome 3, learners are likely to provide plans for soundtracks as part of video productions in which they have responsibility for audio or which are the learner's individual project. For the assessment of learning outcome 4 the evidence will comprise recorded audio material along with reports describing the processes followed.

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 exhaustive and the examples need not specifically 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.

P1: learners will offer simple and straightforward but accurate accounts of the images on screen and the audio which accompanies them and provide interpretation of themes or meanings at a basic level. These ideas will be realistic. 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.

P2: the recordings made by learners will show evidence of location recording which contains a few problems with levels and interference, but is generally effective. Studio recording may demonstrate some technical problems, especially if mixed live but, throughout, a sense of purpose will be clear, even if the overall effect does not fully realise what was intended.

P3: choice of theme is likely to be conventional and include three tracks. For example, for a fictional piece in the horror genre, learners might produce plans for dialogue, some typical sound effects and use of library music of a 'scary' nature. Documentation will include timelines, recording schedules and annotated script, as well as some explanation for the choice of topic

P4: learners will demonstrate basic levels of skill in the handling of sound sources and in using a software application to mix and process sound. For example, levels may at times be uneven but there will be evidence of synchronisation. Learners will show that they have worked towards meeting the requirements of the brief. Results may not be particularly successful, but the activity that led to them will have been purposeful and the outcome have some sense of design and the deliberate application of technique behind it.

P2, P3 and P4: when engaged in 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.

M1: learners will choose relevant examples of soundtracks from existing film or TV productions and discuss the relationships between audio and image. They will identify the audio elements and some of the techniques used to create soundtracks (for example, split edits and effects, using terminology such as 'external diegetic sound'). Learners will offer some interpretation of how sounds produce meaning. They will use technical vocabulary for the most part correctly, but may make mistakes or be unsure about usages at times.

M2: evidence is likely to be competently produced recordings on location and in the studio which show good technical standards of audio reproduction, including effective use of microphone, space and levels. Recordings will not contain errors which interrupt the audience response. Some of the sound recorded, for example to produce original effects, will show an exploration of the potential of the medium.

M3: evidence will include fairly well-detailed documentation which offers a clear picture of how finished pieces will sound. This will include plans for two soundtracks as part of video productions in which they have responsibility for audio or which are the learner's individual project. Learners are likely to have identified four or five tracks which will be mixed in post-production. Details of how the planning process has evolved will be apparent and there will be a sense of the soundtrack's being composed to meet the needs of the script. Learners will provide evidence of how they have worked with the director and taken the needs of the audience into account, as well as referring to influences.

M4: learners will put their plans into action, producing effective soundtracks. In post-production they will show competence in the handling of their audio sources and will use the software application competently to mix and process sound. Levels will be generally good and there will be evidence of effective synchronisation. A few technical problems may be evident but they will not detract from the audience experience. Learners will show that they have met the requirements of the brief.

M2, M3 and M4: when engaged in practical activities, learners will need little assistance, though typically they will still need some support when dealing with more complex technology or trying to apply more sophisticated techniques. Like the pass grade learner, they will respond positively to any help given.

D1: learners will choose examples of film, TV or video productions and explore in detail how the audio elements relate to the onscreen images. An analysis of a feature film sequence will explore issues such as pace, mood and tone, and identify what specific sounds signify and the techniques used to produce them. Reference to the concept of sound design will be supported by comparative evidence from a number of productions. Technical vocabulary will be secure and used correctly and confidently at all times.

D2: learners will have successfully completed location and studio recordings showing a high level of skill in use of microphones, recording equipment, environment, levels and logging. Location practice will be such that sufficient 'clean' audio material is acquired to fulfil the requirements of the plans, the recordings are timecoded and effective working relations with director and crew are maintained.

D3: learners will demonstrate that they have developed plans over time, working with scripts both in consultation with the director and finding ideas through research. Plans will follow one of the standard professional models and are likely to show a degree of personal initiative, for example through the choice of a theme which offers an interpretation of the script in audio terms. The plans will be full and organised in terms of pre-production and will also offer a developed idea which shows an element of fresh thinking and flair.

D4: learners will produce soundtracks for at least two film, video or TV projects which show creativity and technical skill. They will show in post-production a skill in the handling of at least four or five audio sources and a high level of familiarity with the software application used to mix and process sound. The post-production will enhance the intentions of the production as a whole through, for example, the use of audio-processing effects, and will show an exploration of the potential of the medium. Levels will be consistently good and there will be no obvious problems with synchronisation. Technical problems will have been overcome during post-production and the original design is likely to be fully implemented or enhanced. Learners will demonstrate that they have met the requirements of the brief.

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 when 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 Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, M1, D1	**Assignment 1**: Sound and Picture	For a website about film making for young people, learners create a video diary based on their exploration of the relationship between sound and vision.	• All research notes. • Completed video diary.
P2, M2, D2 P3, M3, D3 P4, M4, D4	**Assignment 2**: Commission	Commission from a production company to devise and construct a soundtrack for a production.	• Completed production with soundtrack. • All production and post-production documentation.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC Art and Design suite. This unit has particular links with the following units in the BTEC Art and Design suite:

Level 2	Level 3
Working with Interactive Media Briefs	2D Animation Production
Working with Moving Image Briefs	Film and Video Editing Techniques
	Single Camera Techniques
	Stop Motion Animation Production

There are opportunities to relate the work done for this unit to Skillset National Occupational Standards in Editing, and Sound as follows:

Editing

- E13   Assemble pictures and sound to specification
- E21   Select and assemble sound to support visual images

Sound

- S1   Work effectively in sound production
- S2   Identify, devise and manage the sound requirements
- S11   Acquire sound using a microphone
- S14   Mix recorded sound
- S15   Work with supplementary sound material
- S16   Make sound recordings
- S17   Record sound on location
- S19   Document and store media
- S20   Edit sound.

Essential resources

Learners must have access to audio acquisition equipment. This should include a range of location and studio microphones, with cables and connections. The ability to monitor audio input is essential, either via an audio recording deck or a video recorder with audio input levels and controls. Centres should also have the following:

- a studio facility with mixing desk or an appropriate software application
- video editing applications with a multi-track audio facility or audio applications which can be imported into a video post-production context
- a facility with patch bay or set of connections which enables audio from a range of sources to be digitised into a learner's project with control over settings and levels
- a library of audio effects and music with a copyright status enabling it to be used in productions by learners. A library of film and TV productions which can be used to explore audio-image relationships.

Employer engagement and vocational contexts

Centres should develop relationships with local production companies and aim to develop a programme which includes visiting speakers, live briefs and work placements. Publicly funded media centres will also provide a range of opportunities and collaboration. Contact details for these are available through regional screen agencies.

The following agencies exist to develop film and media in the UK. Their websites provide material for research and many of them include clips of production work. The agencies themselves do not fund production work by learners, but offer information about production, distribution and exhibition initiatives taking place across the UK:

- www.bfi.org.uk – British Film Institute
- www.em-media.org.uk/pages/home – East Midlands Media
- www.filmagencywales.com – Film Agency for Wales
- www.filmlondon.org.uk – Film London
- www.northernirelandscreen.co.uk – Northern Ireland Screen
- www.northernmedia.org – Northern Film and Media
- www.northwestvision.co.uk – North West Vision and Media
- www.scottishscreen.com – Scottish Screen
- www.screeneast.co.uk – Screen East
- www.screensouth.org – Screen South
- www.screenwm.co.uk – Screen West Midlands
- www.screenyorkshire.co.uk – Screen Yorkshire
- www.swscreen.co.uk – South West Screen
- www.ukfilmcouncil.org.uk – UK Film Council.

Skillset, the Sector Skills Council for the creative media sector, has a substantial section of its website dedicated to careers, including job descriptions – www.skillset.org/careers.

Further general information on work-related learning can be found at the following websites:

- www.aimhighersw.ac.uk/wbl.htm – work-based learning guidance

- www.businesslink.gov.uk – local, regional business links

- www.nebpn.org – National Education and Business Partnership Network

- www.vocationallearning.org.uk – Learning and Skills Network

- www.warwick.ac.uk/wie/cei – Centre for Education and Industry, University of Warwick – work experience and workplace learning frameworks.

Indicative reading for learners

Textbooks

Baylis P, Freedman A, Procter N et al – *BTEC Level 3 National Creative Media Production, Student Book* (Pearson, 2010) ISBN 978-1846906725

Baylis P, Freedman A, Procter N et al – *BTEC Level 3 National Creative Media Production, Teaching Resource Pack* (Pearson, 2010) ISBN 978-1846907371

Bartlett B and Bartlett J – *Practical Recording Techniques, 5th Edition* (Focal Press, 2008) ISBN 978-0240811444

Beauchamp R – *Designing Sound for Animation* (Focal Press, 2005) ISBN 978-0240807331

Grant T – *Audio for Single Camera Operation* (Focal Press, 2002) ISBN 978-0240516448

Holman T – *Sound for Film and Television, 3rd Edition* (Focal Press, 2010) ISBN 978-0240813301

Holman T – *Sound for Digital Video* (Focal Press, 2005) ISBN 978-0240807201

Mellor D – *Sound Person's Guide to Video* (Focal Press, 2000) ISBN 978-0240515953

Roberts-Breslin J – *Making Media: Foundations of Sound and Image Production, 2nd Edition* (Focal Press, 2007) ISBN 978-0240809076

Rose J – *Producing Great Sound for Film and Video, 3rd Edition* (Focal Press, 2008) ISBN 978-0240809700

Rumsey F and McCormick T – *Sound and Recording: An Introduction, 5th Edition* (Focal Press, 2005) ISBN 978-0240519968

Websites

britishfilmmagazine.com/filmmaking.html – *British Film Magazine*

www.bbc.co.uk/dna/filmnetwork/Filmmakingguide – BBC information about film making

www.emusician.com – *Electronic Musician* magazine

www.primary-film-focus.co.uk/filmpreproduction.html – information about film production techniques

www.sospubs.co.uk – *Sound on Sound* magazine

www.synthzone.com – links to sites related to sound and vision

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 ...
Creative thinkers	devising soundtrack elements for a video production
	trying out alternatives when recording sound effects for a specific production
Team workers	operating audio recording equipment as part of a group production
	completing the audio post-production for a project
	taking responsibility for audio roles in a studio-based production.

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 ...
Independent enquirers	planning and carrying out research into sound which produces the meaning required in a specific production
Effective participators	producing soundtrack for a video production which addresses issues relevant to, or responds to, the community.

● Functional Skills – Level 2

Skill	When learners are …
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	importing audio material and using audio post-production software to edit and process material
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	using documentation to plan audio elements in a production
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: • text and tables • images • numbers • records	presenting audio material after use of editing software
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	logging audio material and producing design for sound which meets the needs of edited visual material
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	discussing the soundtrack in a film or TV production.