ABSTRACT
Do we need editing software to make films that work, or is it possible to create quality filmed outcomes without the footage leaving the camera? In-camera editing enforces discipline into filmmaking as students decide in advance which shots are essential in conveying meaning. Valuable as a stand-alone technique, it can also function as a starting point for learning about the editing process. This workshop begins with a critical exploration of the editing process, including viewing of a range of sequences, and moves on to explore the possibilities in-camera editing offers for learners at all levels.

EDITING IN THE CLASSROOM
The editing process applies to work on a range of texts and tasks, and the verb ‘to edit’ has a broad range of uses in the classroom: editing involves discussion and critical evaluation, selection, sequencing, revision and correction. Yet in the case of film editing, the interpretation can be reductive with the process becoming almost an afterthought in the creation of a film, or a showcase for technical effects without consideration of the overall aesthetic. By moving beyond a strictly post-production definition to a more holistic approach, the quality of learning and of filmed outcomes can be improved considerably.

APPROACHING A DEFINITION
A visit to a search engine such as Google indicates that the editing process has a range of meanings applicable to culture, industry and creativity. On a site such as Wikipedia, editing is an ongoing collaborative process involving a global readership. In terms of broadcasting or print press, the Editor plays a role heavily involved with controlling content as well as style. In the music industry, a track put together using samples illustrates the concept of editing as a process of creative reinvention. Editing is also a grammatical exercise, whatever your language, and one requiring an understanding of the idiom and the rules governing its usage. Wikipedia’s definition of editing seems to reflect the broad use of the term in education:

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preparing language, images, or sound through correction, condensation, organisation…a practice that includes creative skills, human relations, and a precise set of methods._

With this range of practical definitions in mind, Bordwell and Thompson’s glossary definition of the term as it relates to film begins to seem inadequate:

1) In filmmaking, the task of selecting and joining camera takes
2) In the finished film, the set of techniques that governs the relation among shots

The aim of using an in-camera approach is to engage students with the editing process from the inception of their film, rather than solely at the close of the process.

EVOLUTION OF THE EDIT
Film editing did not arrive at the same moment as film. Prior to 1903 most film consisted of single camera, single shot scenes with little narrative. Long reels of film were needed to produce just a few minutes of screen time and early cameras and recording equipment were heavy and cumbersome. Compared to cameramen on skateboards filming _Slumdog Millionaire_ with hand-held HD cameras, the possibilities offered by early film were limited. And yet early filmmakers were pioneers, experimenting with techniques and exploiting happy accidents to amaze and entertain. The Lumière and Edison companies, as well as Georges Méliès and GA Smith, used simple techniques to pull off camera trickery including beheadings, vanishings, ghosts and dream sequences indicating the extent of creativity and innovation in cinema’s infancy.

Edwin S Porter’s 1903 film _The Great Train Robbery_ represents a move towards a more developed film narrative, with a range of shots edited together to create meaning for the audience. Take three shots in sequence. First, a location shot of a moving train, boarded surreptitiously by two suspicious characters; second, a shot of a guard in a set designed to represent the interior of the same train. The audience is privileged with the information that there
are interlopers on board and sure enough, the robbers enter the carriage and the guard is killed. The audience’s reaction relies on their believing that the guard is in the same train, at the same time as the first shot. In reality this is not the case: he is in a studio, in a set, rather than on location with the train: the scenes could have been filmed minutes, hours, days or more apart, or been shot out of sequence. The third shot takes the audience back to the exterior of the train: the robbers climb onto the roof and the landscape slips past as they attempt to gain the cab unnoticed. The juxtaposition of shots in sequence creates meaning, encouraging the audience to believe the events they witness on screen are immediately sequential.

The experiments of the Russian filmmaker Lev Kuleshov in the 1920s explored audience responses to sequential footage. An actor's face with a neutral expression, intercut with random footage taken at a later date (a bowl of soup; a body in a coffin; a beautiful woman) allegedly prompted audiences to comment on the actor's skillful portrayal of emotions as varied as hunger, grief and longing. You could draw a range of conclusions from this experiment: it's a filmic example of the emperor's new clothes; it's proof of a human desire to construct narrative, even where there is none; it's a demonstration of the power of film and the importance of audience interpretation. Still, sequential narratives became the recognized direction for the development of the moving image: In The Secret Language of Film, Jean-Claude Carriere explains how modern film culture has developed: 'It was here, in the invisible relationship of one scene to the next, that cinema truly sired a new language...this seemingly simple technique generated a vocabulary and grammar of unbelievable diversity.' Carriere also argues that no other language evolves as quickly as the language of cinema: the tastes and desires of audiences move rapidly with the changing output of film production, as the medium marches onwards.

**THE LANGUAGE OF FILM**

The first minute of David Lean’s 1946 *Great Expectations* provides a good starting point for discussing the language of film. The opening shot, of the first page of an edition of Great Expectations, is accompanied by a voiceover reading directly from Dickens' novel. This convention creates an expectation of the verity of Lean's translation of the text, though to a modern audience it may seem rather twee having been used in many literary adaptations and parodied in onscreen fairytales such as the Princess Bride. This shot dissolves into an epic pan of tiny Pip running across the marshes, with the gallows swinging in the wind and the birds’ plaintive cries, evoking a great sense of sadness as the orphaned boy visits his parents’ grave. In three shots, Lean establishes the atmosphere and the aesthetic for the film, and totally absorbs his audience in the narrative.

The pivotal 'To be or not to be' soliloquy from Laurence Olivier’s 1948 *Hamlet* typifies the production and gives us a self-indulgently troubled and effete Hamlet contemplating life – and death – on the castle battlements. In this stage-y film adaptation where Hamlet and the camera barely move for four minutes, there is still much to comment on. Before Hamlet speaks we see the turbulent sea in a high angle, point-of-view shot representing a troubled mind and a precarious position, with the blurred focus connoting Hamlet's inability to see clearly what is before him. To our modern viewing eye these visual metaphors may seem rather heavy-handed, though when you consider the film is over 60 years old it actually represents some rather original direction and editing. In direct contrast we viewed a minute-long sequence from Baz Luhrmann's 1996 *William Shakespeare's: Romeo + Juliet*. The sequence packed 24 shots into sixty seconds creating tension, developing character and giving viewers a true spectacle. It would be too facile to attribute the contrasts solely to the half-century between the examples but the development of film language, and of cinema-going audiences, cannot be ignored.

Today a Hollywood production may consist of two or three thousand individual shots (Bordwell and Thompson) and where these multiple camera, multiple take, high-budget approaches are used, post-production editing becomes crucial for making meaning. However, the smaller-scale productions most common to the classroom need to approach editing with a different philosophy.

**WORKING IN-CAMERA**

In-camera editing is ‘constructing a film by taking shots in sequence, with no subsequent editing’ (Burn and Durran), so the edit takes place throughout rather than at the end of the production process. It stands for a disciplined method of filmmaking where thoughtful planning enhances decision-making and organisational skills. In a group situation, the process encourages cooperation, discussion, and negotiation: ideal for embedding and developing a range of personal learning and thinking skills, or for working towards skills-based learning in a cross-curricular activity. The technique also accommodates a variety of abilities, challenging the more able to produce creative outputs with high levels of accuracy and professionalism whilst at the same time helping those new to filmmaking understand key principles and work to achievable objectives. By producing only what is necessary, learners are not faced with daunting quantities of footage and left searching for meaning in the last stages of their work.
Possible applications include:

- A first introduction to film, or revision of technical and aesthetic principles
- Creating films from short texts, e.g. poems, myths and legends etc.
- Demonstrating a technique or process – in sport, science or art...
- Exploring genre or creating atmosphere
- Understanding continuity editing

**MODELLING THE PROCESS**

YouTube yields plenty of examples of short films produced by editing in-camera, which can provide a working definition of the process as well as an opportunity to discuss narrative, genre expectations or continuity glitches. But the simplest way to explain in-camera editing is to demonstrate it.

The first, and most important principle, is establishing an idea for the sequence. In the workshop we used simple parameters: six shots filmed in the room, with a range of shot types, each shot no shorter than two and no longer than six seconds. Working with learners in the classroom, the process of discussion and storyboarding should be given emphasis to ensure students are clear about what they want to achieve. Films created in-camera should be kept short, with a definite sense of what is to be conveyed to the viewer through each shot. Each shot must be rehearsed carefully several times before it is taken as once you’ve started a sequence in-camera, there’s no going back.

Part of the appeal of editing in this way is that little equipment is required: a camera and a tripod suffice, and at a push, a webcam or mobile phone camera will do the job. A composite cable connecting the video output of the camera to the video input on a projector transforms the projected image into a huge shared viewfinder, so decisions on shot type, framing and duration are taken democratically. In this way, learners become directors and achieve a sense of ownership of the filming process. As the sequence builds concepts such as framing, continuity and mise-en-scène are addressed: the theory becomes embedded in the practise, and the overall impact and meaning of the sequence can be evaluated by viewing the completed product.

**CASE STUDY: PARKSIDE COMMUNITY COLLEGE**

At Parkside Community College in Cambridge, in-camera has been incorporated into a scheme of work on hospital dramas taught in Year 8 Media lessons. The unit explores genre and narrative with a production task giving students an opportunity to put their theory into practise by creating a ‘tense sequence’. In the workshop, delegates were given images from eight shots that comprised a students’ storyboard and invited to arrange the shots in an order that made narrative sense. A variety of possibilities were suggested, and it became clear that the order of the shots in the sequence would have a real impact on meaning: the human desire to tell a story means that even the most random order could be interpreted as a logical narrative. The moving image version provided one answer, comparing assumptions based on the storyboard with what was presented onscreen. Two further examples from Parkside showed the in-camera technique in action: simple, yet highly effective, short filmed sequences made entirely in-camera by students in Year 8 – students motivated by the work, the challenges it posed and the possibilities it offered.

**DEVELOPING TECHNIQUE**

Inspired by the efforts of the students, delegates worked in small groups to experiment further with the technique, employing some simple tricks such as those used by early filmmaker. Editing in-camera, objects or people can be made to vanish or appear suddenly, with the camera switched off then on again in the same position. A focus pull at the start can create a gentle fade in to the image, or shooting with the lens cap on to create a few seconds of black can indicate time passing during a sequence. Whimsical animated titles can even be shot in camera – with a little patience – using a similar approach to stop-motion animation. The possibilities are wide, and the results often instantly satisfying.

**CONCLUSION**

In-camera editing should not be thought of in opposition to editing software but rather as a means of making better use of it, producing streamlined footage from which a final edit can be quickly assembled with the addition of music or the fine-tuning of shot duration. A carefully planned and executed film should need very little post-production attention to make it complete but lengthy footage thrown together without a clear objective will lead to hours of unfulfilling editing in an effort to make meaning where the filmmaker has not managed it.
REFERENCES


‘Media Literacy in Schools: Practise, production and progression’, Burn and Durran, 2007

Parkside Community College’s Media page: www.parksidefederation.org.uk/parkside_media/

‘The Secret Language of Film’, Jean-Claude Carriere, 1994


Great Expectations (1946), dir. David Lean

Hamlet (1948), dir. Laurence Olivier


Versions of the Kuleshov experiment and scenes from The Great Train Robbery can be viewed by searching online video sources

Examples of in-camera edited films from YouTube:

www.youtube.com/watch?v=EliqP9g0G-g

www.youtube.com/watch?v=cHa-zC2DsR4

Still and moving images from Teachers’ TV film ‘Teaching Media: Media Production in the Classroom’

www.teachers.tv/video/2553

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