

Digital Video Editing – Some first thoughts¹

"Digital editing and image manipulation appear to enable students to work more *directly* with the media" (Buckingham/Grahame/Sefton-Green, 1995, 73)

Nowadays it is possible to do digital video editing with most current home computers without any additional costs. Basic software is included and it needs only an extra firewire² cable to connect the digital video camera to the computer in order to capture the video material and edit it straight away.

Integrating video editing into project work is however not just a technical extension of the video production, it brings in new possible focus points for media educational discussion. Children can begin to understand new ways of expression and the consequences of how meaning is constructed through these. New elements such as selection, order and length of clips combined with transitions, sounds and titles extend the active engagement with film, television and video.

Looking into the educational benefits of digital video editing has become more popular in recent years. One of the current examples is the Becta study from Great Britain (Becta, 2002). In a project with 50 schools from across the UK the impact of digital video technology on pupil engagement and behaviour was examined between October 2001 and March 2002. First conclusions indicated that digital video editing could help to create a greater attention to the language of the moving image.

Aspects of learning

Buckingham, Grahame and Sefton-Green explored a slightly different perspective in the third chapter of their 'Making Media' publication (1995) with the relationship between technology and creativity. They examined the application of morphing (metamorphosing images of themselves and their families), hypertext (writing extended adventure stories), poster making (of the Coppola film 'The Outsiders') and digital video editing (producing 'The Outsiders' trailer) within the context of the English lesson and concluded,

"in this case, the technology clearly makes for 'better quality' products when compared with the results of drawing, storyboarding or cutting and sticking usually employed in media education or indeed in English – although this does not in itself tell us a great deal about the quality of the learning." (ibid, 61)

¹ Based on the chapter 'Media Literacy through Practical Work' from the publication 'Democracy, Multimedia Literacy and Classroom Practice' (Alfonso Gutiérrez Martín, Armin Hottmann; Berlin: Mondial, 2002)

² Firewire is also called IEEE1394 or iLink



How could such a 'quality of learning' be defined? The aesthetics of digital video might be the starting point in the discussion areas linked with the 'high quality of teaching'.³ The end results go further than conventional analogue editing and help that the work of the young people is taken more seriously. The simplified technical procedures make video editing more accessible and transparent helping to simulate professional practice.

'High quality' should however be elaborated. Digital editing offers benefits in developing a constructive approach to learning. The active encounter with digital video editing helps to focus the attention of the young people involved.

"Viewing and re-viewing, noting down shots, shaving frames off clips and simply poring over the desktop with its frame-by-frame representation of the film clip, the sound track or the kind of edit used forces the students to adopt a high level of concentration and attention to detail." (ibid, 63).

Conventional reflective analysis of moving images involves a deconstruction of the complex imagery i.e. individual elements are isolated and evaluated separately. The approach with digital editing however involves the *construction* of images. Individual elements are added together and the change of meaning can be analysed. This could be for example a short video clip that is combined with different sound tracks, or the change of a typeface or the colour of a subtitle could evoke different impressions for different audiences, of 'how meaning is made'.⁴

Digital video editing technology

Coming from traditional analogue video editing the possibilities and handling of digital editing seem like a major revolution. While analogue editing equipment used to fill a whole room you can now possess a complete digital edit set-up that is no bigger than one video-recorder or alternatively edit software that can be installed at little cost on a modern home computer.

Digital video editing means that the video material is captured in digital format (normally using a digital video camera) edited and then copied back to digital format. The technical procedure involves linking the edit computer with a 'Firewire' (also called IEEE1394 or iLink) cable and copying the video footage onto the hard disc. Large hard disc storage is necessary, since 10 minutes of video footage require 2 gigabytes of memory space. The footage can be separated manually or automatically, into smaller sequences. Then the actual shaping of the film can start. When everything is finished the film can be copied back to the camera⁵ or digital video recorder – always maintaining the same picture quality since the material stays in digital form.

³ See Maurer in Ministerium für Kultus, Jugend und Sport Baden-Württemberg, 2001, about pathways developing from an aesthetic point of view

⁴ see Kress & Van Leeuwen, 2001, 79

⁵ A digital video camera with an digital input is necessary (DV-IN)



Specific editing software helps to bring all the source material together. All the software works in a non-linear way (as opposed to conventional analogue linear editing). Non-linear editing refers to the order of how the individual edits are aligned. Linear editing required the editor to start with the *first* image of the film and finish with the *last* with no opportunity to change parts of the film afterwards. The non-linear approach means that you can start with whatever part of the film you would like and easily alter any section of the film whenever you want. This has changed the whole approach of editing. Whereas in the past the whole film needed to be planned fully beforehand, the modern software allows the producer to 'play' with the material, to develop the film while creating it directly on the screen.

Digital editing software uses a visual interface. Equal to other image-based or graphics computer software all the steps are executed with the mouse as the main input device. The mouse is used to change the order of the clips by simply dragging a clip, in the form of a short thumbnail (a small image of the first frame of the clip), to the new location – with no need for any technical programming. Clips can easily be shortened or lengthened by pulling the 'in' or 'out' point to the wanted location. The source material is normally arranged on 'tracks' which run from the left (beginning of film) to the right (end of film) of the screen. Zoom functions can help you see the whole film in front of you. The tracks themselves normally include video material with the original sound, extra sound tracks, effects and title channels. Additional material like still images or web images can be imported to the tracks. Sophisticated software allows the user to overlay the tracks on top of each other, blending the material together, creating picture-in-picture effects or 3D transitions.

The easy handling ability of the editing software means that different versions of the edits can be easily saved and opened up again at a later stage, helping create different films using the same source material. 'Redo' functions can help compare the effects of one individual change.

Which equipment is best for educational purposes? Our criteria for choosing the equipment were clear. We wanted the children to concentrate on the content and not the aesthetics of their films. Therefore we were looking for an editing package with a minimum amount of effects and extras. High rendering speed was also important for us, especially to keep up the interest for young children.⁶ Software packages like Adobe Premiere⁷ are good for aesthetic interests and visual multi-layer compositions but they are too time consuming and complicated with our audience.⁸

⁶ We use mainly 'EZ Edit' from Canopus Corp. and Pinnacle's Studio software

⁷ See the project 'Video Culture', Maurer in Ministerium für Kultus, Jugend und Sport Baden-Württemberg, 2001

⁸ The Becta CD-Rom Teaching and Learning using Digital Video contains an overview of current edit software



References

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