CHAPTER 8


‘Finger flowment’ and moving image language: learning filmmaking with table devices

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Introduction
This chapter seeks to explore the making of moving image texts by children and young people using tablet devices. Ultimately, its focus is pedagogical. It is concerned with children, young people and those who work with them in education. For its theoretical perspective we draw on new literacies, locating lived experience at the centre of the discussion of humans using technology. In this way we put people and their practices at the heart of what we want to explore. Finally, we consider the features of tablet devices and ask questions about how sensitive pedagogy and good organisation can shape their use. In this way we resist the arguments made by technological determinists that these devices in themselves confer agency and wellbeing on all who use them. These are devices with much promise for future uses of technology and media in schools but there are many questions which could and should frame our approach to them. This chapter offers an account of a project with two groups of children and young people using tablet devices to create and edit short films. The pedagogical focus is on media production and, specifically, the teaching of the skills of moving image literacy which may or may not be supported by the haptic interfaces of tablets and smartphones. In the section below, we begin by outlining some of the background to the uses of tablet devices in school.

Some background: tablets, media, children and literacy in years to come
The tablet device, the smartphone, the touchscreen are all moving to the centre of what it means to be literate and productive in wider culture in this century in both the developed world and the developing world. Year on year their presence and ubiquity in our lives is increasing. Last year in the UK, the media and communications regulator reported that one in three children had personal access to a tablet device of one kind or another and that the proportion of five to fifteen year-olds using such devices regularly was twice the previous year (OFCOM, 2014). Whilst such high levels of use are being reported in the home, there is significant parallel take up in schools, with teachers, students and parents now engaging with a device which is in regular use in wider culture for entertainment, learning, writing, image production, social media interaction and more. The actual numbers in schools are much harder to quantify, at least in the UK, since such statistics on school ICT equipment are no longer collected centrally. It is possible, however, without too much of a caveat, to predict there will, in future, be ever higher levels of presence and permeability by tablet devices in all
settings for learning, even if the actual uses of such devices vary widely and even if they are not completely unproblematic in everyday use.

The drivers for this increased use and convergence between home and school around tablet devices are interrelated. On the one hand, there is a well-established industry selling apps into schools and homes with very low distribution costs via familiar platforms, often with the promise of raising standards (for a fuller discussion of which see Selwyn, 2013). On the other hand, there is the appeal to school managers and teachers of relatively low cost and familiarity; added to this are portability, shareability and the haptic quality of the device. We are not talking simply about an additional screen - this is a screen with which the user interacts as much through the medium of touch as audio-visually. For younger children in particular, the way of being in the world and learning from it, involves haptic experience across the range of toys, books, digital electronica and more. Furthermore, the haptic habit does not appear to lose appeal as we get older, with adults engaging increasingly through touch with screens, via tablets and smartphones year on year, and less over time with computers, mice and keyboards (OFCOM, 2015). Indeed, one of the participants coined the phrase ‘Finger Flowment’ to describe this phenomenon. This seems to us to encapsulate neatly the key distinguishing affordance of the tablet device whilst simultaneously connecting to the concept of ‘flow’ and to agency and immersion in creative activity (Csikszentmihalyi, 1996).

Given all of the above, if we take the view that cultural practices connect to literacy practices (Street 2003), and that meaning is contingent and context is all important, it could be expected that tablet devices and smartphones would increasingly find a home in schools and after-school settings as artifacts for making and sharing texts of all kinds. In particular, tablet devices represent a form of technology which has the potential to cross the boundary between home and school, and one whose operation in the ‘third space’ between those places represents the possibility of a different engagement between curriculum knowledge and learner dispositions (McDougall & Potter, 2015).

This potential is restricted and reduced where education systems narrow the definition of literacy within curriculum structures exclusively to print literacy. The moving image has become a dominant mode of communication, even as mastery of text and print literacy is still an absolutely essential skill. Regardless of local conditions and draconian levels of accountability which pertain in some education systems, the fact remains that wider culture and lived experience permeates schools in formal settings and in after-school clubs, in project work and in support for curriculum activity. In future, in a more imaginative education system with higher aspirations for its literacy programmes, working productively with both text and media might be part of an integrated approach.

Tablet devices, then, offer the possibility of convergent uses of technology and media in future educational settings, formal and informal. It is important to note ‘possibility’, because the history of the deployment of technology in schools is not overburdened with proven positive benefits which are easy to de-couple from other effects and initiatives (Buckingham, 2007; Cuban, 2001; Selwyn 2013). However, their position at the boundary between home and school combined with their usability and haptic qualities makes them of enormous interest to those researching learning, media and technology. We should certainly expect to see the bundled cameras and software on touchscreens used more for still and
moving image production year on year across educational settings. The importance of building a body of research in years to come, which explores their use from a range of perspectives, is not to be overstated.

So, in which pedagogical domains or theoretical frameworks would such research into tablet devices lie? Firstly, it is important to establish a reason for using the devices. This was relatively straightforward in our case, dictated as much by the affordances, the potential for filmic action in the world, of a device which can be moved around with ease, operated by touch directly on screen, is easily shared, and which appears to incorporate everything you need for making moving image texts. Secondly, in terms of theory, it is important to work with approaches which allow for an analysis of flow and agency in production, to see how the work is best mediated and by which kinds of groupings and activities. This has so far been investigated by early years educators and those with an interest in multimodal analysis of meaning making (Crescenzi, Jewitt, & Price, 2014; Flewitt, Kucirkova, & Messer, 2014). There will also be things to say based on emergent forms of understanding of how such technologies work in quasi-formal settings as both material artifacts and (im)material presence (Burnett & Merchant, 2014). Finally, as we have seen in other research on learner voice and technology (Selwyn, Potter, & Cranmer, 2010), there is a need to take account of the users themselves, their sometimes surprising analogies and words for their use of the devices and artefacts. In the sections which follow, we devote some time to setting the scene and to explaining the processes which we went through, beginning with the educational context for the project.

**Out of the box: A project for Shoot Smart, funded by Into Film**

Into Film is a UK-based organisation promoting and disseminating film education opportunities for children and young people aged between five and fifteen. It was formed out of the moving image education charities, Film Club and First Light and its mission is:

> to put film at the heart of children and young people's learning and cultural experience. Working with the education sector and film industry it will deliver an ambitious and accessible 'See, think, make. Imagine' programme that seeks to make a step change in film learning for 5-19 year olds, encouraging and enabling watching, making and critical understanding on a scale never before seen in this country (Into Film, 2015).

The italics in the quotation are ours for emphasis. As researchers in new literacies and media education, we were very interested in working with an organisation which sought to combine critical understanding and making in activities around moving image production. For us, this found resonance with the creative, critical and cultural model of moving image literacy (Bazalgette, 1989; 2000) and with those who have long argued that understanding moving image language is as much about making or ‘writing it’ as it is interpreting or ‘reading it’ (Buckingham, 2003; Burn & Durran, 2007; Burn, 2009). As media education researchers (Cannon, Bryer & Lindsay, 2014; Potter, 2012), we were interested in working with Into Film on their ‘Shoot Smart’ programme, an initiative which aimed to partner researchers, teachers
and filmmakers in a project which explored the use of tablet devices in filmmaking with children and young people.

The setting for the project was a quasi-formal one. It did not take place in school-time. It was, however, located in a school classroom and infused with some of the formal arrangements and structures of schooling, with registration, grouping and the need to work within strict time constraints. This was useful for Into Film for thinking about how it might work during a formal timetabled setting in school so that it could be fed back to provide models for teachers and learners in the future. For us, there was also enough of a ‘third space’ element about it, not-school and not-home, to think about the ways in which cultural experiences were being admitted into the process of learning about filmmaking (Potter, 2011). It has been suggested elsewhere that opening the spaces, organisation and communication in formal educational settings to wider culture can generate positive and inclusive outcomes for learners in a variety of curriculum areas (see Gutiérrez, 2008, on the sociocultural literacy of the ‘third space’). Moving image work was a natural fit for this kind of outcome because of its pervasiveness in wider cultural experience.

Research questions and theoretical positioning in the project

It was intended that the filmmaking itself built on activities in a sequence of workshops which provided the pedagogical context for working with the tablet devices, connecting the learning about film to learning about filmmaking. In this way the children and young people were working with both the reading and the ‘writing’ of moving image texts. From our point of view as new literacy researchers we were keen to see how tablet devices, as culturally familiar objects, could be used to negotiate the learning within filmmaking and how they lent themselves to the particular constraints of an educational context. We wanted to learn more about how they could facilitate creative moving image production within the particular context of learning about film more widely. This meshed with our concern for thinking about models for moving literacy activities into an engagement with the many contemporary modes of meaning making in, for example, the widely shared short film form. At the same time the workshops could be quite specific about the craft skills and group roles they were learning which are inherent in film production.

Our research design was guided by the intention to explore the following:

1. The ways in which the affordances of tablet devices enhance practical filmmaking;
2. The potential barriers, including technical issues, to such uses which are inherent in educational settings and in the devices and associated software themselves;
3. The children and young people’s views of the tablet device as an enabler (or not) of their creative production and vision;
4. The advice which children and young people would pass on to their peers, their teachers and others in order to be successful in future filmmaking with tablet devices;
5. The successful elements of the pedagogy employed throughout the project, including viewing other films, planning, storyboarding, scripting, shooting, editing and exhibiting.

These areas of enquiry were informed by recent key thinking about media education which foregrounds concepts such as iteration, feedback, convergence and exhibition (Burn et
We wanted to explore meaning making with moving image texts and its relationship to both culture and pedagogy in ways which aligned with both semiotic analysis and cultural studies approaches, agreeing with Burn (2009) that one need not be privileged over another, but that both views are interdependent. Of further interest was the way in which the physical space of the groupings and organisation of the participants worked with the virtual organisation of the screen, its software and inherent promise of ease-of-use and ‘makeability’ (Furstoneau & Mackenzie, 2009).

With this in mind we embarked on a series of visits to workshops with each age group and documented each stage of the process. We collected image, video and audio data with the children and young people and engaged them in discussion which was non-intrusive and guided by their motivations and interests week by week. We also wanted to hear from the professional filmmakers involved about their pedagogical choices and issues, including their views about working with a device which conflated the traditional roles in film-production into one artifact.

The project took place in an inner city, all-through institution (combining a primary and secondary school) with twenty children and young people in each of the after-school groups, namely: Year 5 (around ten years-old) and Year 8 (around thirteen-years old). The school had a significantly economically deprived and diverse intake. The workshop sessions took place on the primary site. For the Year 8 group, scenes were filmed around the secondary school site and in the immediate and familiar locale, (including a nearby open space and a fried chicken shop). For the younger children in Year 5, filming was on the premises in the classrooms and in the immediate environs of the school playground.

A significant goal of the project was to develop students’ film language and understanding through collective viewing of short films and relevant excerpts of longer films which complemented and informed the practical work. The filmmakers provided a series of short example sequences which illustrated specific aspects of moving image language. They then set up short activities which moved straight into shooting and editing, taking these steps in a more rapid and iterative way in order to exploit the potential of the tablet devices. In the section which follows we discuss some of the ways in which learning about these issues was enhanced more directly by the possibilities inherent in the tablet devices.

**Iteration, feedback, convergence and exhibition**

Firstly, our overall evaluation suggested that tablet devices facilitated a kind of heightened experience distinguished it from the pre-digital. This was not unproblematic and it depended frequently on sensitive interventions and adjustments made by the adults to their pedagogical strategies in the setting. Taken together, these factors ensured that the locus of agency in the project was with the human actors and that the learning was centred on filmmaking, both of which were supported by, and not led by, the tablet technology.

Pedagogically, the filmmakers/facilitators followed a well-trodden path in starting with discursive film appreciation and following it with the deconstruction of a finished product. In this case they invited students to remake a short sequence from *E.T.: The Extra-Terrestrial* (Spielberg, 1982) on the tablet devices by sequencing stills of individual shots (see Burn & Durran, 2007). In the process they exploited the affordances of the editing app which employed an album and timeline as onscreen metaphor for selecting and ordering for
editing, using the ‘finger flowment’ referred to earlier. Thumbnails were dragged by finger movement across the screen from the album to the place on the timeline and re-ordered as necessary.

Through this activity the children were encouraged to recognize and explore the construction of a dramatic sequence (E.T.’s first appearance in this case) and to consider the narrative significance of different choices, based on familiar visual codes and conventions. Our observations suggest that the use of tablets quickly facilitated this iterative process, ‘the ability to endlessly revise’ (Burn, 2009, p.17) because the students were able to engage with the processes of selection and shaping material so immediately. The facilitators’ approach assumed and exploited familiarity with the use of touchscreens on the tablets. They spent five minutes discussing the impact of different shots and of camera angle, movement, point of view and light, half a minute explaining how to use the software, and then clarified their expectations of the outcome of the editing activity, as students’ fingers were on the tablets.

In the following brief transcript from dialogue that one of the researchers had with a small group of Year 8 students, the decision-making around editing emerges as more compelling than any issues around the technical operations of the device or the editing app. Amy questions and works out an important feature of the editing interface, reflecting the ‘mutability’ (Manovich, 2001, p.133) and provisionality of software - that the original videos (what Kayleigh calls the videos that ‘they’re based on’) - do not disappear from the editing bin once they are moved to the timeline:

Amy - I think it will be a dark one
Kayleigh - We’ve already got that one
Amy - So why’s it still there? She gestures at it, in the editing bin
Kayleigh - Cos it’s, they’re based on it, they’re just there
Theo - They stay in there um
Kayleigh - That one… her finger hovers over an image
Theo - They stay in that and then you’re putting them down on the timeline so…
Amy - Yeah Kayleigh’s finger highlights the image so that it appears in the viewing window as Theo speaks
Theo - you’re learning how to edit Kayleigh’s finger points at an image
Kayleigh - Don’t you think it’s that one cos then he’ll be looking around, this one pointing at an image looks like he was just in a rush cos that’s why it’s in a corner
Amy - Yeah that will be the one where he drops it pointing at an image and then moving it to the timeline

The facilitator who was leading the session then suggested that they ‘play around’ with the length of the media on the storyboard timeline. It took him a minute to explain how to do this by moving ‘the orange handles.’ Within two minutes the pair were not only discussing whether the edits came too slowly but also changing the length of time that the images took to appear. Kayleigh’s comment ‘Wait let’s try it out this way’ exemplifies their willingness to experiment in response to the provisionality of the software. They became more reflective about six minutes into the editing activity:
Kayleigh- *I think these ones need to be like quick flashes... because (they’re) like scared of each other*

Almost at the same time as she made the suggestion, she was able to act on it and the pair reviewed the results, with a view to seeing whether the quick cuts communicated the characters’ fear.

The Year 5 children made similar speedy progress in the initial hands-on activities and one of the facilitators was surprised that he was not called on much more frequently for assistance with editing. In editing the final film the Year 8 facilitator noted that it took him two or three minutes to explain the processes to Grace, and yet soon afterwards she was talking about how precise she had to be in capturing the moment when the students were in the air jumping as she trimmed a ‘locked-off’ shot. Her description of it being ‘like a blink, kind of... like when you blink and you think that you’ve missed something out’ suggests that she was beginning to get a sense of how editing involves what she called a ‘trick’ in the manipulation of time and space (recalling Murch, 2001).

In terms of immediate feedback, the tablet’s cultural status as a device that is primarily for viewing means that its offer of instant review is an irresistible facility, enabling users to see their material appearing as a finished product, in full screen, on the go. Some students explained that this helped ‘generate ideas’, facilitating collaborative decision making, since the tablet screen is large enough for several people to watch at once. Burn cites the ambiguity of the computer screen ‘as both a surface of working production and a surface of display’ (2009, p. 76) as a significant aspect in the dissemination of ideas between groups of children working in close confines in an animation project - a finding that is replicated and enhanced in the work we observed with the tablet devices. The more immediate feedback provided during the process of filming disrupted the traditional process of filming and editing in sequence. This echoed findings in a previous project which indicated that tablets supported an improvisational approach (Cannon, Bryer & Lindsay, 2014) - a different workflow by comparison with traditional filmmaking, since ‘takes’ can be filmed, viewed and discarded in the moment. In this case filming ‘in’ the editing software further conflated the tasks because of the offer of a review and prompt to save or discard after each shot was taken.

The key factor here is the short distance between action and review. Learning to tell a story through shooting and editing and instantly reviewing decisions that are made allows for a fast iterative path to learning about moving image grammar. This was one of the most successful elements that was exploited particularly during the early stages of the project, representing a heightened experience of the editing interface or ‘multimodal mixing desk’ (Burn & Parker, 2003; Sefton-Green, 2005) and bringing awareness of how the final product might look to the actual moments of filming.

**Problematising pedagogy**

There were two filmmaker/facilitators, both former teachers, and different pedagogical impulses at play in this project. Doecke underlines ‘the teacher’s role in facilitating the meaning-making practices that occur’ in the ‘culturally-specific site’ of the classroom (2015, p. 149). Teachers’ values and creative aspirations clearly shape their interventions in projects that involve whole class or group outcomes like this. Like any collaborative process, the final
filmmaking involved subtle negotiations between the facilitators and the Year 5 and 8 students - engagements to which the former brought their identities as ex-teachers, as workers in a creative industry and as expert filmmakers and enthusiasts. Of course, the students brought their own cultural affiliations, interests and expectations too, as well as their experience of using touchscreens. The context of an after-school club provided a ‘third space’ for sharing and negotiating all of this as they embarked on an ambitious creative endeavour together (Gutiérrez, 2008).

The filmmaker working with Year 5 was interested in the possibilities of the narrative suggested by the stimulus of a magical box. He explained that, ‘the box was a device to allow the kids to be able to speculate and think about what was inside it or what would happen if you went inside it - so it had endless possibilities for stories.’ He presented this to the students in a very immediate way by assuming a role in the film as a kind of ‘demon head-master’ (Cross, 1982) demonstrating the power of the box through his own reactions and framing the real class in role as his fictional class, subject to his magical powers. This involved a playful signalling and positioning of the children as actors in the drama. The spontaneous results were then edited into a compelling film narrative.

The filmmaker working with Year 8 underlined that, ‘for us it was imperative that we showed them… examples of well-made films... for us to be able to show them how much more complex it is and how excited we were about it.’ Because of this conviction, although he recognized that the tablets lent themselves to working quickly in an improvisational way he was not necessarily interested in developing a practice that would accommodate this beyond the initial exploratory stages. The parameters of the project brief, the tight timetable and ironically, the ease of use of the technology at the students’ disposal did not provide much scope for instruction about the complexities of filmmaking, yet for him this remained a pedagogical priority. A moment in the film made with the Year 8 group reflects his interest in introducing some regard for the practices of a master filmmaker to the process. He ‘blocked’ or choreographed the student actors in lines at significant points in the narrative and directed them to react to events such as the appearance of a large box, in an ordered sequence. One of the students filmed the responses of the actors one by one, as they stood in a line. At the end of the project the filmmaker showed the Year 8 group the end of the crop duster scene from North by Northwest (Hitchcock, 1959) acknowledging the influence of Hitchcock’s visualisation and direction of this climactic moment on his own conception of the drama they had created (particularly the choreography of the onlookers as the plane burns)\(^1\). This approach had a significant impact on the students’ involvement, on the texture of their acting and on the narrative structure of the final film. In terms of the students’ experience and their learning about the processes of filmmaking it was as significant as the affordances and limitations of the particular camera and editing equipment that they were using. There was no time for the Year 8 group to reflect on the relationship between actor, director, camera operator and editor implied by this particular approach to filmmaking nor much discussion about whether the technology they used suited this particular approach (as opposed to a ‘shaky-cam’ or Dogme style approach, for example). However one student commented insightfully that the ‘iPad may take a wide shot but it doesn’t take the shot that they really need.’ The filmmaker himself was frustrated by the tablet’s limited depth of field,
complaining that they couldn’t get the variety of shot types ‘that you would get in every single film.’

Classrooms are complex places - whether formally or informally organized as after-school spaces - and working in creative ways always involves subtle negotiations of interests, tastes and values in the process of what Franks terms ‘the act of selection, shaping, framing and re-representation that are surely the key features of art making’ (2000, p. 67). In the 1970s, Raymond Williams asserted that it is not the invention of technology that is significant but the ways that it is deployed in the cultural sphere (Williams, 1974). This case study documents a familiar shifting pattern of workflow and accommodation with new technology that is as common to the classroom as it is to the film studio and editing suite. Tablets and touchscreen technology certainly offer the kinds of ‘new expressive possibilities’ for creative work that Buckingham, Grahame and Sefton-Green documented in reflecting on practical media work in the classroom two decades ago (1995, p. 72). But it is worth acknowledging that new ways of working inevitably ‘interact with existing cultural forms and patterns of social use’ (ibid, p 72) and that teachers’ and students’ pedagogical and expressive purposes may not necessarily coincide with the potential or possibilities that new technologies seem to offer.

One reflection of the filmmakers’ respect for their craft was their search for peripheral technology to enhance the tablet’s potential so that the students might experience something closer to traditional filmmaking practices. One of the filmmakers reflected on the tripod mounts as ‘the real breakthrough… as they allowed the students to have the experience of stabilizing the iPads and decide if they wanted to pan, tilt and execute shots.’ The mount was integral to the success of the ‘locked-off’ shot in the Year 8 film because the camera needed to be kept in exactly the same position between shots for it to be effective (so that the students appeared to be falling from the sky in the final edit). When shooting the final films both tripods and mounts became the domain of one student director. There was notably less gathering around the screen or passing the iPad around to review shots as in the earlier, more experimental sessions. Stabilizing the camera like this signaled more clear-cut distinctions between the roles of camera operator/director and actors that was closer to industry rather than collaborative, classroom practices.

On the question of sound, the generally poor quality of recording straight into the tablet was an issue that could not be so easily remedied and several students felt the lack of microphones was an issue. However, the facilitators did not regard this limitation as a barrier to the creation of engaging filmic narratives. They showed both groups short films or excerpts from longer films, which relied on a dramatic use of sound and music rather than dialogue, as stimulus material. This included The Red Balloon (Lamorisse, 1956), Fence (Murdoch, 2005), Room 8 (Griffiths, 2013) and Milk Run (Soskin, 2013). Through the process the student actors clearly recognized that an expressive or heightened form of acting was being required of them to communicate the story. In this way the quality of sound recorded on set became less of an issue, prompting more attention to the ways in which moving image language works to create meaning.
**Convergence and multifunctionality**

Even allowing for the troubles with sound, the students were vocal in their praise for the benefits of working with a multifunctional device, one which combined all of the previously separate functions in traditional filmmaking and enabled ‘finger flowment.’ The tablet device acted as storyboard, camera, editing and screening device. There were no trailing cables and hold-ups as new devices were connected and material uploaded. As a result, particularly in the early stages of the project, we were struck by the ease with which relatively large groups were able to engage with different aspects of moving image making in flexible ways in small spaces and with limited time, editing quickly as they leaned against the wall in a corridor for example. In the first session a small group of Year 8 students asked how to ‘pause the film and start it again’ in constructing a short sequence. Once prompted to take more than one shot, they found they could immediately review the shots in sequence, so that they could see the effect of a mix of close-ups on the hands and face. In this instance there appeared to be a tangible gain enabled by the technology in the increased visibility of the filmmaking process.

The convergence of functionality in the relatively large screen designed for viewing as well as making proved to be a further asset for the novice filmmakers. Grace reported feeling confident about issuing instructions in the role of director/camera operator on location because she was able to review and ‘to see where they (the actors) need to be’ on the relatively big screen. Arguably this ease of use is a case of the creativity of digital culture residing as Sefton-Green puts it, not ‘so much in its media – that is, its capacity to support forms of visual, audio or even text production – but in its subject positions: how it situates young people in relationship to meaning or forms of engagement’ (2011, p.250). The additional agency conferred on the social actor in the setting was what enhanced the process for her. The technology played its part in this alongside the planning and pedagogy of the facilitators.

**Theorising ‘finger flowment’: haptic influences on the making of meaning**

A body of research literature is emerging around the nature of touch as mode for meaning making, with specific reference to the use of tablet devices (see, for example, articles in Walsh & Simpson, 2014). This work recognizes that touch screens on tablet devices have enhanced affordances beyond portability and visibility, with touch now being recognized as a key operand in the making of meaning, a new mode to add to the ways in which digital technology is in the world. The participants in this project, older than those usually focused on in studies of touch screen devices, looked on this enhanced level of interaction as, simply, ‘normal’ suggesting a level of integration of touch as controller. One student commented ‘it’s just a click, it’s just a tap of the screen and it’s there’ and another suggested that engaging with ‘finger movement’ on the screen as the principal means of interaction and control meant ‘it flows easy.’ In discussion he referred to this enabling aspect of the tablet touchscreen as ‘finger flowment.’ As we have noted in earlier sections, this brings together the notion of flow and fashioning, a condition of making in which the focus on the task is absolute and the agency of the maker is promoted (Cannon 2011; Csikszentmihalyi, 1996). In the suggestion of a fluency in the work pattern there are analogies with the process of writing to express ideas, using tools that because of their immediacy and familiarity effortlessly serve the producer’s purposes. There are further analogies with crafting as design, in which work is
shaped iteratively over time. The tablet devices did lend themselves to this honing and crafting approach even though they had some drawbacks in other respects related to file management. At the user level, in the central activity, they acted as enablers of filmmaking and of new literacy production.

**Concluding thoughts**
Burnett and Merchant (2014) write that their work in literacy and technology in educational settings ‘…has led us to question the relevance of the binary distinctions that recur and proliferate in the literature – those that assume boundaries between online and offline, digital and print and so on – but it also provokes us to question how we see literacies more generally’ (2014, p.37). We have seen in this project how the tablet device itself has contributed to this blurring within the context of learning moving image production. This happened in four important ways:

1. The culturally familiar artifact represented an opportunity for boundary crossing between formal and informal settings of education.
2. The previously separate craft skills of filmmaking, from planning to scripting, shooting to editing and exhibition, were all conflated into one screen space.
3. As a consequence of the above, the distance between experimentation and review in making moving image language was closed to the point of hardly being there at all, forging rapid connections between the skills of ‘reading’ and ‘writing’ moving images.
4. The activity was mediated through touch, the ‘finger flowment’ concept, an area which needs further investigation as the nature of human interaction with technology begins to bring about change in all spheres of social action, including both formal and informal settings for education.

We identified a key factor in the success of this project as a willingness on the part of the filmmaker/facilitators to employ a flexible pedagogy which negotiated the demands of learning the craft skills and grammar of the moving image alongside the exploration of tablet devices. When they employed more traditional approaches to shooting material, the particular affordances that we have identified played a less significant part in the filmmaking processes. Teaching and teachers should not be written out of the picture as we imagine future educational activity around new literacies. Facilitative roles may shift and change over time, but these tablet devices are co-present with human actors in wider culture and require sensitive pedagogical intervention which is cognisant of their potential for all learners to engage productively with new and wider definitions of what it means to be literate. This intervention must recognize human agency itself as a determinant of success, above and beyond what may be claimed for the devices themselves.

**Note**

1. Showing the students images of the mosaics of stills from Hitchcock’s films from the nearby tube station was a nice conclusion to the project. Hitchcock was born close to
the school and his association with the local area was a source of interest to many of the students.

References


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