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Constructing the challenge of digital didactics: the rhetoric, remediation and realities of the UK Digital Curriculum

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Abstract

This paper uses Bolter and Grusin's remediation approach in investigating the manner in which new forms of digital media are re-casting the communicative and epistemological import of knowledge, teaching and learning. Given the considerable disparity between the rhetoric and realities of the educational implementation of information technologies to date the paper argues that particular attention should be paid to the refashioning of existing forms of pre-digital didactics in current forms of digital didactics. These themes are pursued through an examination of the UK government's ongoing 'Digital Curriculum' project as a case study of remediation of didactics in the digital age.

Keywords: Remediation, didactics, policy, discourse, advertising

Introduction

The principles and practices of didactics are subject to continual contestation and change. The close relationship between the ever-evolving interests of nation state, politics and polity and a country's dominant ideas about knowledge, learning and teaching has been well documented (Green 1990). Indeed, the notion of didactics emerged in seventeenth century Western Europe as a result not only of the epistemological debates of the time but also prevailing social and cultural expectations, political pressures and economic demands (see Nordkvelle 2003). Thereafter the didactics of the nineteenth and twentieth centuries become necessarily institutionalised, commodified, ritualised and factory-like as befitted the needs of burgeoning industrial economies (Thomas 1986). Now, a few years into the increasingly 'post-industrial' twenty-first century, it is therefore appropriate for us to once again reassess the notion of didactics – this time in light of the so-called 'information age' and 'digital revolution'. Indeed, the shift from an industrial to a post-industrial society based around the commodification of information and growth of telecommunications technology has, in the eyes of many commentators, already led to significant transformations of education and didactics. Contemporary forms of didactics are now presented under the guise of flexible and fluid forms of lifelong learning which are informal, non-institutionalised and ready the meet the needs of a 'knowledge society'. Thus there is a distinct sense in some quarters of the educational community that these times require nothing less than completely new forms of teaching and

learning – and that a ready solution lies in the new media that are seen to be driving the knowledge society.

Within the general spectre of the knowledge society, the emergence of digital technology and increased digitization of everyday life is seen by many commentators as constituting a key challenge and opportunity for didactics in contemporary society. Thus the process of breaking down and codifying the processes of teaching and learning into a series of digital bits and bytes has taken on a heightened significance for many educationalists who see digitised technologies as offering education a chance to rid itself of its physical, cultural and other 'offline' limitations. Technologies such as the internet, for example, are seen as allowing education and educators to break free of the synchronous norms of classroom-based learning, and to allow access to learning on an anytime, anyplace, anypace basis (Dobson 2002). It is argued that teachers can shift from the often antagonistic role of omnipotent learning provider to one of mentor and advisor - a 'guide on the side' rather than 'sage on the stage' as King (1993) put it. Students can learn through 'hard fun' rather than being subjected to the 'teaching disabled' pedagogies they have hitherto encountered in the classroom (Negroponte 1995). Computerised technologies have therefore been argued to 'blow-up' the notion of the conventional school (Papert 1984) and transform knowledge into a boundless 'curriculum without walls' (Furlong *et al.* 2000). For many commentators new digital technologies constitute nothing less than a 'ground zero' for education – promising a substantial if not total re-engineering of the industrial age systems of teaching, learning and schooling.

Of course, a wealth of critical social science research and scholarship on new media and society highlights the obvious flaws in such a determinist reading of technology and educational change. Although there is an understandable optimism in educationalists' hope that information technologies prove to be unproblematic and autonomous forces for improvement and change, such totalising techno-utopianism is confounded by the fundamentally unchanged classroom and school settings to be found the world over - nearly thirty years since the introduction of the classroom computer and ten years since the widespread introduction of the internet. Thus, as has been reasoned from the outset of this book, instead of naively anticipating the total renewal and replacement of education through technology we are best perhaps advised to consider how 'new' digital technologies are contributing – if at all - to the recasting, recoding or in Jay Bolter and Richard Grusin's (1999) words, *remediation* of didactics.

The notion of remediation has gained considerable currency in the social study of new media over the past decade. Building upon the work of Marshall McLuhan, Bolter and Grusin's thesis focused on the relationship between visual digital expressions such as computer games and webpages and earlier media forms such as film and television. Here it was noted that the 'new' visual media of the 1980s and 1990s achieved cultural significance not by usurping all media that had gone before but by paying homage to, drawing upon and refashioning preceding media as well as challenging and rivalling them. Bolter and Grusin (1999) therefore explored how 'new' digital forms both borrow from and seek to surpass earlier forms. As such the notion of remediation provides a insightful corrective to the prevailing emphasis on novel aspects of new media and can be a powerful concept to employ when examining what is happening when new media forms meet the content of older media forms. As Bolter and Grusin (1999, p.45) contend:

> "the representation of one medium in another ... is a defining characteristic of the new digital media ... [there is] a spectrum of different ways in which digital media remediate their predecessors, a

> spectrum depending on the degree of perceived competition or rivalry between the new media and the old".

Although Bolter and Grusin's original analysis was primarily concerned with the remediation of aesthetic and cultural aspects of visual media, the notion can be a useful prism through which to examine the bearing of digital technologies on contemporary forms of education and didactics. Thus we now go on to use the notion of remediation to investigate the manner in which new forms of digital media are re-casting the communicative and epistemological import of knowledge, teaching and learning. Given the considerable disparity between the rhetoric and realities of the educational implementation of information technologies to date we should pay particular attention to the refashioning of *existing* forms of pre-digital didactics in current forms of digital didactics. Thus we need to take time to ask *if* and *how* new media forms are indeed leading any significant recoding of teaching and learning. In particular we shall pursue these themes through an examination of the UK government's ongoing 'Digital Curriculum' project as a case study of remediation of didactics in the digital age.

Construction the challenge of the digital didactics: The case of the UK digital curriculum and curriculum online

The digitalisation of teaching and learning through the production of education software and latterly 'online content' has a long history in the UK. Unlike many other countries there is also a long history of state-support for the production of educational software - from the Thatcher administration's 1987 *Software for Schools* initiative to the current Labour government's *National Grid for Learning* programme of the late 1990s. At present UK schools are subject to the '*ICT in Schools*' (ICTinS) policy programme and its stated aim to stimulate the 'e-confident' use of what are now termed 'digital learning resources' throughout the educational sector (DfES 2002). Under the aegis of the *ICTinS* drive a parallel *Curriculum Online* programme was launched to "improve[e] access to ICT and multimedia resources for all pupils" (DfES 2005a). Throughout the first years of the twenty-first century, *Curriculum Online*'s primary legacy was the provision of £330 million of 'Electronic Learning Credit' (eLC) funding distributed from central government to individual schools, which were then able to spend their credits on a range of approved digital learning resources. Alongside this support for existing educational software, concurrent attempts were also made to stimulate the production of new digital learning content. Most notably the British Broadcasting Corporation (BBC) was commissioned to provide a range of free online learning resources meeting the requirements of the UK's statutory National Curriculum. This so-called *Digital Curriculum* was seen to complement the eLC funding by offering digital learning resources for curriculum areas and learners likely to be less well-served by the existing educational software market. Part of the Digital Curriculum remit entailed a commitment to producing learning resources which were explicitly learner-centred (rather than school-centred) and therefore accessible at home or in the classroom. Between 2001 and the end of 2005 around £150 million was dedicated to the production of Digital Curriculum resources, with the BBC externally commissioning more than half this content from commercial software producers. From 2006 these projects have been made available to teachers, learners and parents via the '*BBC Jam*' service[1].

In theory these initiatives mark significant state and commercial commitment to the digitalisation of didactics. The mass of digital learning resources now available to teachers, learners and parents in the UK has certainly been presented as a digital 'upgrade' if not a transformation of teaching, learning and knowledge. Yet scrutinising the Digital Curriculum project for the nature

and extent of its remediation of didactics is a difficult task at present as actual use of these resources 'on the ground' is only in its early stages. Thus whilst the main contestations and challenges of digital didactics will eventually take place throughout the production, configuration and use of individual digital learning resources in the classroom and home, an important but often overlooked element of this remediation process is the 'selling' of the notion of 'digital learning' by political and commercial actors to often unsuspecting and sometimes sceptical audience of school managers, teachers, learners and parents. Indeed, during the lifetime of the *ICTinS* programme there has been a voluminous production of government policy documents, official statements, commercial advertising and industry rhetoric designed at persuading 'stakeholders' of the value of this new digitally-driven phase of UK education. It is this discursive arena that therefore provides the main focus of attention for our analysis in this chapter. In particular, we can explore the rhetorical 'shaping' of technology-based didactics by political, commercial and educational actors involved in the Digital Curriculum project. Through an in-depth examination of the discursive construction of the 'Digital Curriculum' over the past six years the chapter highlights the numbers of ways in which didactics are seen to be remediated in the socio-technological context of digital learning resources and, in the overall spirit of the book, we address the main question of how the notion of a digital curriculum has re-mediated, and hence re-contextualized political, commercial and educational concerns with didactics. In particular we can use the example of the UK Digital Curriculum to explore two specific aspects of remediation and rhetoric, i.e. what kind of *didactic* and *epistemological* challenges are seen to emerge from the digital curriculum and its influence upon the practice of teachers, learners and what counts as 'official' (and unofficial) knowledge?

Examining the social construction of digital learning

Our examination of the discourses and rhetoric surrounding digital learning starts from the Foucauldian notion of discourse as the historical and cultural production of systems of knowledge and beliefs which are shaped, and shape, our behaviour (Foucault 1981). From this perspective, any analysis should aim to extend individual texts into their wider discursive fields – seeking to understand the effects of bodies of discourse rather than focusing on the internal organisation of individual examples (Barker 1998). Examination of discourse production in an area of education such as digital learning can thereby lead to a powerful understanding of "the multifaceted public process through which meanings are progressively and dynamically achieved" (Davies 1989, p.45). With this in mind we now go on to construct a detailed account of how the notion of digital learning and digital learning resources are being constructed in the political, industrial and commercial discursive arenas of UK education technology. Through a content analyses of key texts the chapter asks how the notion of digital didactics has been constructed over the past six years by policy actors and political agendas as well as commercial and journalistic discourses. In all these instances we seek to identify the wider philosophies, priorities and intentions which are driving the ongoing digital content agenda in the UK.

Given the many different forms that this discursive construction has taken, we have systematically examined two distinct sets of sources. Firstly, an analysis of policy discourse covered all publicly available and officially commissioned reports, positioning papers, policy documents, published speeches, press releases and statements pertaining to 'digital learning', 'Curriculum Online', the 'Digital Curriculum' and 'BBC Jam' from government departments and other stakeholders. Searches were conducted of the Hansard, Government News Network, Lexis-Nexis, the Stationery Office, Department for Education and Skills and Department of Culture, Media and Sport databases using the search terms 'Digital Curriculum', 'digital learning', 'Curriculum Online' and

'BBC Jam' and a date range of January 2000 to September 2006. Similar searches were conducted of the Times, Guardian, Telegraph and TES newspaper online databases. Secondly, all instances of commercial print advertising for digital learning resources and services were included in a systematic discourse analysis (see Jensen 1993). All advertising featured between January 2001 and September 2006 in the education technology supplements of the Guardian, Independent and Times Educational Supplement national newspapers were included in this analysis (representing 68 volumes, 1820 pages of text). We now go on to offer an analysis of the recurring discourses, debates and depictions of the didactics of the Digital Curriculum and digital didactics in general apparent within these two set of texts.

i) The nature of digital learning and knowledge

Whilst displaying an understandable concern with societal and market-level concerns, much of the political discourse surrounding the Digital Curriculum has focused on the nature and outcomes of digital learning itself. Here, an interesting tension between the 'new' and the 'old' traditions of technology-based education is apparent. For example, digital learning is often positioned as a transformatory educational experience. Throughout the examined texts, digital learning is sometimes portrayed by political sources as leading to a range of new outcomes from increased internationalism to unshackling students from restrictive educational structures; "help[ing] us see a new and different way of looking at things" (Clarke 2004) and giving learning a contemporary "Xbox feel" (Shaw 2006a, p.14).. As the initial Digital Curriculum proposals from the BBC put it:

> "[we do] not seek simply to transfer the structure of traditional teaching to an online environment, but instead to create an online space, in which students discover and explore concepts in innovative ways" (BBC 2002).

Yet digital learning has more often been portrayed in more prosaic and mechanical terms within the political discourse, with digital learning associated with many established educational discourses – such as the ability to "raise standards still further" (Charles Clarke in DCMS 2003b), "boost performance and standards across education" (Stephen Twigg in DfES 2005a), foster 'world-class' learning (Estelle Morris, in DCMS 2003a) and so on. In this way, digital learning is portrayed as offering a reinvigoration of traditional means and modes of teaching. Thus educators are promised "digital educational aids tailored specifically to the national curriculum" (Cassy 2002), providing "more efficient ways of keeping in touch and giving feedback on students' progress. (Derek Twigg in DfES 2005a) and even transforming less popular elements of the traditional offline curriculum such as Latin into "must do" subjects (Cole 2002). As the then Secretary of State for Education promised, "digital resources will not replace but will enhance traditional and tried teaching methods" (David Blunkett in DfEE 2001).

Only in a few instances throughout our analysis was digital learning presented as offering a distinct form of learning and teaching – more often than not by commercial actors. Abstract allusions were occasionally made to the 'new' forms and outcomes of learning offered by digital learning – such as *Cambridge University Press* (2003) slogan of "e-Learning ... e-xcite, e-nrich, e-xplore ... @cambridge". A less subtle portrayal of the futuristic possibilities of digital learning was provided by the *Virtual Education Partnership*. Beneath a somewhat dated impression of a 'virtual reality' space containing a circle of five flat screen monitors, the advertisement text describes the digital learning resource in question as:

> "produc[ing] creative applications for organising and mapping knowledge, accelerating the learning process...CreativeVR™ is an interactive, fully networkable 'knowledge space' that allows users to create multimedia galleries of their pictures, videos, sounds, documents and internet links ... the software is also coded for Virtual Reality".

These examples aside, advertising more commonly reflected distinctly traditional notions of education and learning. Indeed, visual portrayals of 'old' learning in this way were nearly five times more prevalent than 'new' learning. In contrast to CUP's allusions to exciting and enriching students, *Plato Learning* (2001) summarised its "comprehensive collection of interactive learning materials" in terms familiar to the contemporary educational era of modernisation and new managerialism – "achieve, attain, succeed, triumph, thrive, enhance, accomplish".

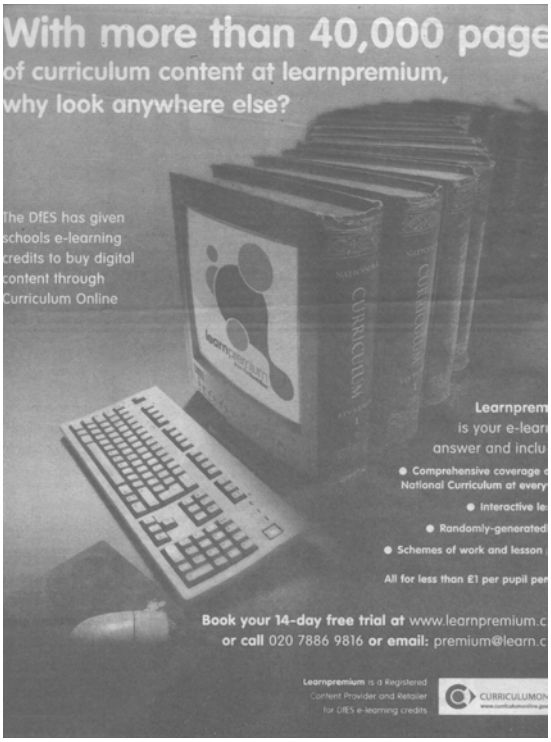

Figure One. *learnpremium (2003)*

This over-riding notion of 'old learning' apparent in the commercial portrayals of digital learning is perhaps best illustrated in the marketing for the *learnpremium* (2003) online service (figure one). In this advertisement the educational heritage of the online content is encapsulated in a computer screen embedded into a tapering line of old, leather-bound books with spines inscribed with "National CURRICULUM Keystage 1". The accompanying text also locates the firm and the product within familiar educational contexts such as the DfES, testing and their national curriculum. In a similar manner, the marketing of the *Heinemann Explore* (2004) product was even more overt in its portrayal of traditional and established learning – presenting images of test-tubes, castles and river valleys to stress the curricular connotations of the software. This advertisement was notable for also drawing on the provenance of non-digital learning resources, promising "FREE Books when you spend your eLCs on Heinemann Explore".

ii) The nature of digital learners

In contrast to this 'traditional' portrayal of digital learning and knowledge, the prevailing political discourse when it comes to digital learners is very much one of change – in particular emphasising changes involving the individualisation, personalisation and empowerment of the student experience. In this way digital learning resources are seen as providing an education system tailored to each individual learner's requirements:

> "ICT transforms education and the way that children learn. Every child matters, and I want a system of personalised learning that allows each of them to learn at their own pace, in ways that suit them best" (Charles Clarke in DfES 2004).

> "In the past it was about getting it right for the teacher. Turn that on its head, and say, this is what's going to be right for kids" (Liz Cleaver BBC controller of learning, in Gray 2006, p.15).

> "The whole feel of it is going to be learner-centred rather than teacher-centred. The concept is that it will be an immersive world, a rich environment which will be different for different age groups, and which children will want to come to by choice." (Derek Butler, senior commissioner of BBC Jam, in Shaw 2006b, p.17).

Thus digital learning is repeatedly positioned as a significant re-engineering of the UK school system - "for the first time, it is becoming possible for each pupil to learn in a way and at a pace that suits them" (House of Commons 2002b). The BBC have spoken of "putting creativity and control in [children's] hands" (Blake 2006, p.28) and creating "something innovative and distinctive which really works for [children]" (Mark Thompson, in Blake 2006, p.28). Crucially, this learner-centred approach is seen as "empowering learners" (Charles Clarke in DfES 2003b), acting to "motivate the learner and make a real difference, both to their personal development and to their understanding of a topic" (BBC 2002), as well as "engag[ing] minds, capturing the imagination of both learner and teacher" (Andrew Adonis in DfES 2005b).

Individually-centred digital learning is also seen as having collective benefits – most notably the democratisation of learning and the overcoming of barriers to participation and achievement. Thus the flexibility of digital learning is seen as "dissolving barriers of distance, time or attitude" to learning (Tessa Jowell in DCMS 2002a). This allows learning benefits to "ultimately reach every child in every classroom in the UK" (Thompson 2005); especially "people and groups sometimes excluded from conventional channels" (Estelle Morris in DCMS 2004) and "young people who are disaffected, or disengaged" (DfES 2005a, p.27). This confidence in the democratic ability of ICT is often rationalised through the notion that digital technologies are an integral part of youth culture and children's lives, and are therefore an ideal vehicle through which to engage all children:

> "These children are of a screen generation. They go home to a Playstation and expect the same dynamism from a PC in school. Our products will help them experience that." (Cassy 2002).

> "Children can totally immerse themselves in computer games. We want to make their objective learning, rather than just finishing Grand Theft Auto" (Mark Thompson, cited in Lee and Mansell 2004).

With a few notable exceptions (see below), learners were consistently portrayed throughout the examined commercial texts as passive recipients of digital learning – usually turned out neatly in pristine school uniforms, working in classroom environments and often sat behind desktop computers. Cartoon pictures of students in non-school clothing were occasionally used, but generally children were depicted in the traditional sense of the school student focused on learning the school curriculum. Visually, students were pictured as being always 'on-task', either intently concentrating or obviously enjoying their work. In the accompanying texts students were rarely, if ever, implied to be individualised learners. In contrast to some of the earlier political rhetoric these were not a noticeably 'new' generation of learners.

Figure Two. *Pip Online (2004)*

A rare example of advertising not centred around curricular or teacher matters was found in the advertisement for the *Pip Online* (2004) website authoring service (see figure two). This advert was distinctive in its presentation of learner-driven use of a digital learning resource. Underneath an off-kilter photograph of three grinning pupils is the headline "Meet the webmasters of class 4". The text of the advertisement goes on to describe the product in terms of allowing children to assume responsibility for designing and producing class websites and subsequently learning through their creative endeavours:

> "If you thought you needed to be a boffin or techie to design and manage your primary school website ... think again. ... within 24 hours, your pupils will be adding and editing content so easily that even the best designers will be amazed ... A large part of the site is dedicated to kids, so they will be able to publish their work ... A Pip website could be the most exciting thing to happen to your school all year. But don't just take our word for it. Ask the experts. Ask class 4" (Pip online 2004).

iii) The nature of digital teaching and teachers

Of course, the discursive construction has not concentrated on learners alone, with the role of digital learning in assisting teachers also prominent in political and commercial rhetoric. Here care has been taken to position digital learning as a tool for teachers, or at least one with considerable benefits for teachers. Thus digital learning represents 'a step change' in the quality of the educational tools available to the teacher (Miliband in DfES 2003a) by bringing "exciting new learning tools into schools [and] giving teachers more options" (Douglas Alexander in DTI 2001). Again, a distinct tension between the new and the old is apparent within these teacher-centred discourses. In some instances digital learning is presented as leading to enhanced and often new forms and modes of teaching. As Charles Clarke outlined, digital learning should ...

> "transform classroom practice ... enhanc[ing] both the process and the product of education ... helping teachers and lecturers innovate in the classroom. Today's measures will help teachers be creative and embed best practice for all." (DfES 2003b).

This altered state of teaching sometimes involves distinct changes in the roles of teachers and their students. Teachers are positioned in a providing and guiding role – expected for example "to forage" for online learning resources (Frank Flynn in Cole 2002). On the other hand learners assume more control and participation in shaping their learning, with digital resources "enable[ing] users to participate in new and exciting ways, perhaps by creating their own content or getting involved in real as well as virtual activities." (Tessa Jowell in DCMS 2002b).

This said, another set of discourses – often from the same political actors - presents a more conservative portrayal of teaching in the digital age. Here digital learning provides teachers with closer control over their students' learning, "allow[ing] teachers to monitor progress more precisely and push pupils on to more challenging topics as soon as they are ready" (David Blunkett in DfEE 2001), as well as "improve[ing] assessment, testing and examination" (Miliband in DfES 2003b). Alongside "raising standards in the classroom" (House of Commons 2002b) and "accelerat[ing] reform and transformation" (DfES 2005b), digital learning resources are depicted "removing the frustrations" of existing constraints in the classroom (Cabinet Office 2002). Put simply, digital learning allows teachers to return to the craft of teaching:

> "Curriculum Online will provide teachers with the best resources available and will free them up to do what they do best – teaching" (Estelle Morris in DfES 2001).

Although learners were more than twice as likely as teachers to feature in the pictures used in the commercial advertising of digital learning resources, the text of these advertisements were predominantly concerned with teachers. The majority of this discourse drew upon traditional notions of teaching and teachers and sought to reassure potential purchasers and users of the seamless fit of digital learning with existing practice. According to one advertisement, digital learning resources were was therefore "a teacher's dream come true!" (*Test Nation* 2005). In some cases digital learning was portrayed as a means of putting right what was wrong with traditional practice – be it matters of poor resourcing, examination attainment or student engagement. In this way digital learning was presented as offering a better, but not completely transformed, version of the classroom. For example, *Anglia Campus* (2001) positioned their online subscription service in terms of assisting teachers in delivering quality education: "Hard-pressed secondary teachers will be thankful to know that the

information revolution can offer solutions to the perennial problem of obtaining effective classroom resources". Underneath a picture of an older female teacher and four students at computers are a series of reassuring and familiar slogans such as "online learning", "supporting the National Curriculum", "written by teachers", "raising standards".

Indeed, many of these texts took great care to reassure teachers of their enhanced rather than usurped position in the digital learning scenario – with the traditional role of the teacher protected by digital learning rather than threatened. This is illustrated in marketing for the *RM* product 'ICT Alive'. With a headline stating "Puts you at the heart of the lesson", a photograph shows six primary school pupils and their classroom teacher staring into the white glow of a computer screen. "With innovative software, lesson plans and assessment tools, it puts you the teacher at the heart of the ICT lesson. Used individually or for the whole class, it's a great way to engage everyone" (Research Machines 2003). Other advertisements also presented digital learning as a means of correcting the perennial frustrations of using ICT in classroom practice. For example, one advertisement reasoned that "its all about finding and learning, not just searching" (*Heinemann Explore* 2002), with the firm portrayed as removing the time frustrations from online learning by providing teachers with 'curriculum matched' resources allowing them to maintain ultimate control of the learning process.

One wider issue pervading the commercial discourse produced during later years of the Curriculum Online programme was the bureaucratic process of procuring digital learning resources. Thus the notion of firms helping teachers to deal with the burden of having to 'spend' their ELCs emerged – one company asking: "who can help you through the maze of digital learning resources?" (*Heinemann* 2003). Thus we can see the digital learning marketplace begin to emerge through advertising slogans such as: "Use your eLearning Credits with us and receive a 5% discount – it's easy" (*Inclusive Technology* 2003); "Primary and secondary schools – your eLC clock is ticking. Don't waste your eLCs. Buy our award winning resources today" (*Actis* 2004); or the commercially direct command of "SPEND YOUR e-learning credits" (*Proquest* 2004).

Discussion

From even this brief examination it is clear that a variety of strategies are being employed to shape and sell the concept of digital learning and the wider 'challenge' of digital didactics – culminating in a somewhat ambiguous account of what digital learning is and what it may have to offer to learners, teachers and knowledge (see table one). For example, digital learning is portrayed in some texts as a complete reassessment of educational practice *but*, on the other hand, as a set of benign tools which fit seamlessly into the daily drudgery of the classroom. Digital content is a familiar re-packaging of the traditional curriculum *yet* provides access to knowledge which is futuristic, exotic and endless. These tools allow teachers to exercise control over what students are learning *yet* emancipate the individual learner to do whatever they wish. Young learners are active and adept consumers of commercial technoculture *yet* reliant on the guidance and protection of adults. Throughout all the texts it would seem that digital learning is presented as both an active challenge to *and* benign continuation of existing forms of 'non-digital' didactics.

■ *The impact of digital learning on knowledge*	Knowledge as bounded within the traditional confines of the official National Curriculum, provision of 'safe' knowledge	vs.	Knowledge as boundless and just-in-time, creation of 'risky' knowledge
■ *The nature of digital learning*	Traditional, safe, enhanced quality, collective process	vs.	Innovation, risky, increased quantity, individualised process
■ *The impact of digital learning on learners*	Regulated, controlled, passive	vs.	Emancipated, empowered, active
■ *The impact of digital learning on teachers*	Increased control of learning opportunities and outcomes, freedom to teach, chance to be effective in testing, meeting targets and raising standards	vs.	Guide and forager on behalf of the learner, facilitator of learning opportunities

Table one. *The discursive construction of digital didactics as continuation and challenge*

In many ways this deliberately ambiguous presentation stems from a shared set of wider pressures that digital learning is subject to within the context of the UK government's *ICTinS* policy and the surrounding education technology 'marketplace'. For example, many of the conflicting portrayals of digital learning and learners reflect wider commercial conflicts as competing public and private actors jostle for position and gain a sense of what advertising 'pitch' will best sell to educational consumers. From the perspectives of policy makers, the rhetoric of remediation serves mainly to 'sell' the idea of continued investment in national technology policies to practitioners, politicians and the public rather than necessarily reflecting the emergence of a new didactical form. Our analysis also highlights how digital learning has become party to a convergence of educational, economic, cultural and social policy concerns relating to issues such as social inclusion, modernisation of public institutions, and globalisation. All these influences coalesce into a portrayal of digital learning which appears understandably as "an uneasy, sometimes quite contradictory, combination of [...] imperatives" (Scanlon & Buckingham 2003, p.192).

Although inevitably coloured by the pragmatic and often contrary nature of commercial advertising, business manoeuvring and public policymaking, all of these official discourses surrounding digital learning exhibit a restrained and surprisingly conventional portrayal of technology – far more restrained than some of the academic commentary in the area. For example, most of the discourses surrounding digital learning examined in our analysis are mundanely positive in outlook, approaching what Bryson and de Castell's (1994) term a 'modernist/romantic' account of educational technology. Much of the shaping of digital learning also replicates the familiar determinist

manner in which society tends to understand technology, positioning digital learning within a limited 'cause and effect' perspective where education is faced with having to adapt in the face of technological change (see Bromley 1997). In this sense much of the prevailing discursive construction of digital learning in the UK can be seen as a straightforward continuation of the ways in which earlier generations of education technology (such as the microcomputer and internet) were shaped. From this points of view the 'new' digital learning drive would appear to be a prolongation, rather than radical transformation, of previous education technology thinking.

As such the Digital Curriculum could be seen as a case of 'business as usual' for education. In the initial stages of the discursive promotion of Digital Curriculum there is little sign of competition or rivalry between the technology of the classroom and the technology of the computer and internet with, if anything, the Digital Curriculum representing the normalising of digital technologies into pre-existing educational forms and practices. Alongside the preservation of the traditional classroom setting and teacher/pupil dynamic, the spectre of the statutory, formal National Curriculum looms large over the Digital Curriculum project. Despite some protestations to the contrary, the BBC Jam service, for example, is specifically predicated upon the UK's official national curriculum for 5–16 year olds, with spending restricted to compulsory curriculum subjects (such as Maths, English or Geography) or else the specific curriculum needs of minority groups. In very few circumstances is there mention of an experience of knowledge *beyond* or outside the concerns of the National Curriculum. As Bolter and Grusin remind us, remediation is the formal analogue of the marketing strategy commonly known as repurposing, whereby a Disney film (for example) will spawn a vast array of product tie-ins, from amusement park rides to action figures to fast-food packages and clothing accessories. In some ways the Digital Curriculum can be seen as nothing more that the re-purposing of the UK government's National Curriculum – a 'spin-off' or extension of the existing National Curriculum 'brand' and its epistemological boundaries.

These continuities notwithstanding, the discursive constructions of digital learning examined in the chapter *do* present some new and significant challenges which, it could be argued, reflect a noticeable recasting of UK educational technology. In many ways these challenges stem from the increased political, economic and commercial significance of digital content as compared to previous incarnations of educational technology. Yet there is little sense that these changes are due to the technology of the time, but rather the wider educational and political climate of the time. Indeed, as a digital (re)presentation of what should be learnt in schools and how it should be learnt, digital learning content has also become embedded in a range of wider (and well-rehearsed) educational conflicts. For instance, long-running ideological conflicts such as the nature and form of the curriculum, the disciplining role the teacher, or the introduction of other experts into the classroom was apparent within some of the discursive constructions of digital learning. In many ways the refashioning of education within the discourse of the Digital Curriculum was being driven by current wider didactic debates and demands being enrolled into the discursive domain of digital learning, rather than being promoting the 'new' challenges or affordances of digital technologies.

Conclusion

This analysis can only serve as an initial exploration of the remediation of digital didactics and we will need to keep a close eye on the ways which the rhetorical concerns and conceits of UK policymakers, industrialists and educationalists shape the actual consumption of the digital curriculum in the classroom and the home. Of course the transition of these political and

commercial messages through other contexts of construction (such as retailers, local authorities, schools and classrooms) is not straightforward and there will be need for further research which continues to address the often 'messy translation' of ideology and policy discourse into practice (Moss and O'Loughlin 2005). Yet, as it currently stands, we would argue that there is little to suggest that digital learning will become anything more than another under-achieving and ultimately disappointing phase of education technology.

In this sense, our concern with the currently limited and conservative discursive construction of digital didactics should lie not in the short-term political or commercial conflicts that it reflects but in the likely long-term impacts on educational practices and outcomes. As Moran-Ellis and Cooper (2002, para.8) assert, texts such as those examined in this paper are not simply descriptions or portrayals but have the far more significant purpose of being "designed to be persuasive to [their] audience … rhetorically and discursively constructed so as to bring about the enrolment and positioning of players". Thus the limited discursive constructions of digital didactics highlighted in this paper act to preserve education along their own confined lines – seeking to control and limit rather than represent the user (Wajcman 2004).

We are therefore faced with the distinct possibility that policies such as the Digital Curriculum will serve only to curtail and stymieing the undoubted educational potential of digital technology in UK teaching and learning. We have seen how the current socio-technical configuration of digital learning is limited, in many ways, to one of replicating the producer interests of 'traditional' education - with the predominant positioning of digital learning by political and commercial actors is centred firmly around the maintenance of the educational *status quo*, and with digital learning being portrayed as a conservative continuation of teaching, learning and knowledge. As our analysis has shown, digital learning resources are being constructed in ways which (re)present the politics and practices of 'learning' as they were before – merely in a slightly enhanced digital guise. Thus many of the examined texts act primarily to frame demand for decidedly non-active, non-personalised and non-empowering forms of digital content – suggesting that digital learning resources will do nothing to change the educational *status quo* they are so loudly purported to technologically transform. Thus, if digital didactics remain rooted in the structures and power dynamics of education then there is every likelihood that policies such as *Curriculum Online* and *Digital Curriculum* will serve to reproduce (or even reinforce) existing inequalities. As we have seen within this chapter, throughout the discursive construction of digital learning it is the limits – rather than the limitlessness – of the digital learning landscape which are being moved into place. Thus a valuable role for critical scholars of education and technology is to now begin to explore ways in which this political and commercial conservatism can be challenged from the 'bottom-up', and seek to influence the remediation of digital didactics in ways which benefit the individual teacher and learner as well as the wider producer interests of state, industry and economy.

Footnote

[1] The BBC has stated that the rather informal and playful name 'BBC Jam' was chosen for their digital learning service "after lengthy consultation with children because it could be pronounced by five-year-olds and carried connotations of musicians 'jamming' rather than sounding educational" (Derek Butler, senior commissioner of BBC Jam, in Shaw 2006b, p.17)

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