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Shared Spaces: Informal Learning and Digital Cultures

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Abstract

The objective of this project was to investigate children and young people's learning in and about 'digital cultures': an area of learning which increasingly occurs outside the formal settings of schools. We aimed to look at the style, structure and content of learning in relation to digital technologies in informal settings often overlooked by schools such as homes, libraries and community centres. By investigating these styles of learning, we aimed to build links between young peoples' leisure and learning experiences and to suggest ways for schools to draw on young peoples' informal knowledge and experiences with digital culture. As part of the investigation, we established three projects at an informal arts and media centre in north London: a computer game making class, a cybercafe and an investigation into chatrooms. Our findings suggest the following:

1. Through their everyday consumption of digital cultures, young people are defining and negotiating meaning around various social concepts, including gender and identity, and developing technical skills, new forms of literacy and new styles of learning.
2. Both in everyday use, and in educational settings, informal learning practices coexist with formal ones, and therefore it is problematic to define informal learning in terms of style, content or structures.
3. We need a framework for the teaching of digital technologies which takes account of 'developmental' aspects of learning particular software as well as new styles and forms of learning which young people are developing through their interactions with new technologies.
4. New software needs to be developed which will support young people in their digital productions, encouraging creative expression and the development of critical awareness of digital technologies.

Context

It is widely recognised that there is a 'digital divide' in Britain, not only between the 'media rich' and the 'media poor', but also between digital activities which are taking place in homes and those in schools (Buckingham, 2001; Facer et al, 2001; Livingstone and Bovill, 2001). Whilst many families invest significant portions of their expendable income on technology in order to gain the cultural capital necessary for their children to

compete in the 21st century market, much of the skills and knowledge gained in homes is not recognised by schools. Young people's use of the Internet in the home, their game playing activities and their creative digital productions are rarely engaged with in schools where the use of computers is often limited to keyboarding, and scarce Internet searches are severely hampered by filtering software.

This 'digital divide', raises new and important questions about learning. Young people are learning many skills and concepts related to digital technologies, but they are not being taught in the formal environment of schools, nor is their learning being carefully structured through recognised teaching techniques. New ways of learning based on risktaking and trial and error approaches, instead of the one-way transmission of knowledge often found in schools, are being experienced by children as they engage with digital technologies (Downes, 1999). Furthermore, new technologies are enabling young people to reconstruct notions of individual identity and global citizenship. (Turkle, 1984). Young people's experiences with a range of new media raise questions for schools concerning how to engage with the changing technologies surrounding young people today.

There are numerous discourses and models of learning connected with media consumption and production. These discourses and models have different and sometimes contradictory ways of constructing learners and the learning environment (Facer et al, 2001). On the one hand there are panics around new media which position children and young people as being at risk from the dangers of digital technology and cultures. In this view children are in need of careful teaching and controlling, as they are unable to learn the correct and safe way to use digital technology on their own. In complete contrast, there are discourses around new technologies which position children as ready learners and technology as offering endless easy-to-use resources for worthwhile learning. This latter view of children as 'natural cyberkids' overlooks many aspects of learning and digital technology, not least the socio-cultural aspects of learning or the possibility that there might be a progression of skills related to learning new technologies.

These discourses are echoed in the various pedagogical approaches to children and digital technology. The model of learning known as 'constructionism', developed by Papert and colleagues at MIT (Kafai and Resnick, 1996) in relation to Logo, has echoes of

the 'natural cyberkid' discourse described above. In this model, children are employing new ways of learning via computers, ways of learning which are non-linear and contradict many models currently in practice. According to the model, the more time children spend building games on the computer (with the computer doing the teaching) the more the child will understand the programme and therefore develop logical thinking skills.

On the other hand, popular pedagogies found in many schools are based on the work of Vygotsky (1962). This model of learning emphasises the important role of a more able peer or teacher who is scaffolding learning and acting within a learner's 'zone of proximal development'. A Vygotskian model aligns more closely with the discourse which constructs children as at risk of time-wasting (amongst other things) if not carefully instructed. Finally, with the learning of digital technologies taking place in informal settings such as homes, there has been considerable interest in contextualising learning and looking at different styles and forms of learning (Coffield, 2000; Lave and Wenger, 1991). Lave and Wenger's concept of 'situated learning' focuses on looking at learning as a type of social interaction, rather than a cognitive activity. This concept can be applied to the learning of digital technology and cultures, with young people acting as 'apprentices' as they learn the language, skills and discourses from 'masters' of digital technology.

Shared Spaces

The Shared Spaces study was designed as a way of engaging with and examining some of these discourses surrounding learning and digital cultures by looking at how children and young people use digital technologies in more 'informal', out-of-school settings. Beyond this, it aimed to suggest ways in which schools might engage with the new knowledge and experiences digital culture can offer young people, as well as drawing on the informal styles of learning which characterise young people's out-of-school experiences with technology.

The study was practically-orientated, with the aim of piloting several new approaches that would engage with young people and their use of digital technology. The project established three curriculum initiatives at an informal education and arts centre in north London (WAC Performing Arts and Media College) which runs various arts activities on weekends for young people from low-income families. Our key questions were as follows:

1. How do young people learn in relation to new media? What does 'informal learning' look like in practice?
2. How do young people move from being 'consumers' to being 'producers'? How can their passive knowledge of new media be activated' through creative production?
3. What is the specific potential of this kind of creative work for socially disadvantaged groups? What is the 'added value' here?
4. How can new technologies build bridges between home and school, or leisure and learning? Activities/Data collection

The three curriculum development projects which were implemented as part of the study looked at a range of digital media, targeting 3 – 13 year olds' consumption and production activities. The participants were drawn from the WAC community, and therefore many came from low-income and ethnic minority families in north London.

The three projects were as follows:

1. A cybercafe for children ages 3 – 13 and their parents/carers

The cybercafe was part of WAC's regular Saturday programme for 3-13 year olds (around 250 children each week), and consisted of a loosely supervised suite of computers which gave children free time on the machines. There were 10 – 20 participants in the cybercafe at any given time, and the cybercafe tutors directed users to Internet sites and provided assistance in using the relevant software. Occasionally parents joined their children in the cybercafe, for example, in order to explore a CDROM with a young child or to help search the Internet for homework projects with an older child. However, the cybercafe was largely dominated by children playing games with their peers or using the Internet in a variety of ways. Rebekah Willett, the research officer, worked in the cybercafe and engaged with the children relatively informally over the course of the academic year from September 2001 to June 2002 – meeting for a total of 27 day-long sessions. Rebekah kept a field diary as a way of noting observations from the cybercafe; she made audio recordings of children talking as they played on computers together, as well as children and adults working on computers together; and she took 'screen shots' (a 'picture' of what is showing on a computer screen) to record particular activities, for example 'talk' in chatrooms. She also interviewed several participants in their homes in order to observe their digital use in another informal setting. The data collected in the cybercafe provided us with information on the types of digital arts activities children are

doing in informal and unstructured settings, how they learn skills and knowledge necessary for engaging with digital cultures, how they interact with adults in informal settings, and how they interact with peers, using digital culture for various social purposes.

2. Computer Game Making course, for 9 – 13 year olds

This more formal course was also offered as part of the Junior WAC programme on Saturdays as a distinct taught course. It had 10 participants (all boys), and it too ran from September 2001 to June 2002. The aim of this course was to engage with young people's passive knowledge of computer games and to make that knowledge active through production of their own games. The course had three main elements: analysis and critique of games, learning software and creating games projects. During the analysis of games, the boys looked at games they play and discussed the games in terms of elements such as quality, genre, narrative structure and representation. Having analysed games in context of their experience of playing, the boys started designing their own games, first on paper and then on computers. The work on computers included a project in which the boys designed posters advertising their games (see website www.wac.co.uk/sharedspaces). During the poster design stage the boys had to consider the topics covered in their analysis, and so the posters made explicit some of the boys' knowledge of gaming and engaged the producers in further analysis of their gaming experiences. The posters as well as the final projects required use of professional production software (Photoshop for editing images, Flash for animating and making interactive elements, and two 3D software packages for making sophisticated images which match the type of images in games the boys play). A large section of the course was spent teaching the software skills, and the final projects were hampered by the complicated nature of the software. Although the goal was to make a simple interactive 'game', in the end, the final projects were animated introductions to games which the boys had created. The boys were interviewed at the end of the course, and although they were slightly disappointed that they didn't have more of a 'game' as an end product, it was clear that they learned a fair amount about the process of making a computer game and why the games they play are time consuming to produce and therefore expensive to buy.

The research officer was present at all the classes and recorded the interactions between the tutor and the students, as well as between the students when doing group work. She also made copies of what the participants did each day on the computers, she kept a field diary and finally she interviewed the participants and tutor at the end of the course. The data from this course give us information on ways that teachers can engage with young people's knowledge of computer gaming. The data also show how technology can support (or possibly hinder) young peoples' knowledge and learning, and how different models of learning shed light on young people's learning of digital technologies. The course is being repeated at WAC this year, and with the help of our findings the course has been restructured hopefully to provide more successful outcomes.

3. 'Chatterbox', a course on chatrooms, for 9 – 13 year-old girls

This course was constructed as a result of the analysis of some of the activities that were occurring in the cybercafe. Whereas the dominant activity for boys in the cybercafe was playing games, the girls were more interested in communication activities. Using chatrooms is a popular activity with the older girls (and boys), but it is one which has received attention in the press for everything from destroying the English language to putting young girls at risk from paedophiles. The chatroom course was an intensive 2-day workshop (6 participants), which attempted to engage girls in thinking critically about their engagement in chatrooms. The aim was to research and discuss chatrooms and then design and set-up a chatroom which would be moderated by the participants over the course of 6 weeks. Similar to the games class, the course looked at several chatrooms and analysed them in terms of elements such as usability, appearance and safety. The girls discussed why they participate in chatrooms, how they learn the conventions, what makes them feel safe or unsafe, and elements which make them want to participate in chatrooms. The girls then designed their own 'ideal' chatroom (on paper) and presented their ideas to each other, leading to further discussions. After the two-day course, a staff member at WAC set up a very simple chatroom for the girls to use and moderate. The girls had discussed and agreed on rules for their chatroom which would be enforced either by themselves as moderators or by the software (for example, they wanted a swearing filter to be in place). The chatroom ('Purechat') was live for the last month of the WAC year, but the girls were unable to recruit very many participants.

Therefore, their role as moderators could not be observed.

The research officer was present during the course as well as follow-up sessions. She recorded conversations between the tutor and the participants, as well as between the girls themselves. Recordings were done on audio and some video footage was also taken. Screen shots and a field diary were also collected as data. The data from this project give us more information on how to engage with young people and digital culture which is important to them (similar to the games class). Furthermore, the data shows how young people learn the culture and conventions of chatrooms and how they use chatrooms for various social purposes.

Key Issues

The project yielded vast amounts of data which raise various questions about young peoples' interactions with digital technologies. Looking at the data from the three projects (the games class, the cybercafe and the chatroom course), we identified four areas for analysis, all of which inter-link but have important implications as individual topics. The topics which we analysed are technology, pedagogy, social uses of digital technologies and informal learning. Our key findings on those topics are summarised below:

Technology

Existing software for digital production is either aimed at professionals or young children. There is a need for the development of software which will support young people's creative productions without hindering them.

Our developing knowledge of production and consumption skills may suggest a kind of progression, that is an order and shape to children's learning and capacity understanding in this area.

Teachers need to be aware that group work, particularly in connection with digital technology, can often result in the more able child unable to engage with the less able children, thus negating the main purpose for such work.

Pedagogy

A variety of what one might call critical practices were identified in relation to new media, ranging from formal analysis in the games class to every day expressions of preference in the cybercafe.

Different models of learning help explain young people's interactions with digital technologies. In many cases, constructivism (seeing children as actively constructing their knowledge and skills through their engagement with ideas, materials or, in this case, technology) seems to describe interactions we saw. Other times, 'situated learning' (seeing learning as a particular type of social interaction as opposed to a process which takes place only in the individual mind) describes the way children learned, particularly in social situations such as the cybercafe.

Social uses of digital technology

We categorised the social activities connected with new media into five groups (fan-related, game-related, educational/edutainment, electronic communication and other web-based activities)

Predictably we found activities to be gender-related. Boys play games which exude masculinity (games which feature action, prowess and risk taking); and girls play games which fit with feminine discourse (games based on chance, games which are social, allow for verbal interaction and give girls opportunities to pay attention to detail).

Activities such as email and chatrooms show how young people play with language, identity and taboo topics as they define themselves in their pre-adolescent world.

Informal learning

There were a range of formal and informal teaching and learning practices.

Formal and informal practices coexist, even within short conversations between teachers and learners.

Seeing 'informal' as the opposite of 'formal' and defining each according to content, style and form is problematic.

Changes from our original proposal

The projects as outlined in our original proposal, for the most part, ran as anticipated. There were slight changes in two of the projects. In the cybercafe, we expected to see more parent/child interaction, but in fact, there was little of this to observe. The few times when parents were involved with their children, the parent was helping children with a task (homework, research or simple graphics). On reflection, this finding is not surprising, given that the cybercafe was supervised by two adults (plus the research officer). Parents, understandably, often used the time their children were on computers to read newspapers or have coffee with friends. These interactions were, perhaps, as an important part of the community as what we had intended to observe. Even at a young age, children's autonomy on the computers was an important development for both the children and the parents. Children were able to be part of the digital culture without the intervention from parents, and parents contributed to an informal social community at the arts centre which provided emotional support on a range of issues. The second change to our original proposal was in the web-based communication project for 14 – 16 year olds. After working with the 3 – 13 year olds in the cybercafe, we decided to extend the communicational aspect of the cybercafe into the Chatroom project, instead of starting a new project. This allowed us to build on the knowledge both we and the young people were gaining. Also, the research officer had developed a good working relationship with the young people in the cybercafe which allowed the work on the communication project to be less formal and more intimate. The project we developed was centred around girls in chatrooms (see 'chatterbox' summary above). By focusing on girls we were also able to work with a different group of children, given that the games class consisted of all boys. This project is also relevant to wider concerns about the dangers of chatrooms for young people.

Further research issues

One of our key aims was to investigate and describe informal learning, looking specifically at learning around consumption and production of digital cultures. We have identified different models of learning which describe the processes children go through when engaging with digital technologies. We have also raised questions which challenge current conceptions of informal learning. However, we have not discussed the usefulness of such findings (for example, formulated a map which will assist teachers in knowing when and

how to apply these models). If children are developing new styles of learning based on trial and error and risk taking, what does that mean for schools? We have also made speculative statements about several aspects of the project. In our investigation into chatrooms, we have raised questions about the relationship between technology and culture. We speculated about the role of new technologies in making meaning from discourses around class, gender and ethnicity. We additionally speculated that new models of learning are particularly valuable for disaffected youth but in order to make such claims for a wider policy audience, we would need a larger study, and we would particularly want to compare learning in formal settings such as schools with more informal learning situations.

Finally, our goal of accessing young people's knowledge of digital culture through production raises questions for further study. In our projects, the young people were hindered by the complicated nature of professional software. We do not know if it is possible for young people to make games or moderate chatrooms. The model we were working with (critical analysis through production) may be unrealistic – perhaps it is not possible to engage with children's media culture without formalising and losing an essential aspect of it. These findings point to the importance of the development of new technologies (for example, game making software for young people) which will empower students; tools which will make visible the embedded knowledge of their media culture.

Outcomes

The project has attracted interest from many different sectors, and results have been shared at various conferences. In addition to being invited to speak at conferences, the project team held two seminars at the Institute of Education, University of London. Several publications have resulted from the project. A website containing the publications as well as many of the young people's projects discussed in the report has been set-up in attempt to attract an even wider audience (www.wac.co.uk/sharedspaces).

We are in discussion with the English and Media Centre with a view to them publishing a book, gathering together this research with other recent work on creativity and digital culture. The WAC Performing Arts and Media College is running the cybercafe and games

class again this year, and the findings from this project has helped inform the teaching practices at WAC.

Conferences/seminars

‘ Learning Beyond the Digital Divide’ David Buckingham, Julian Sefton-Green and Rebekah Willett. Seminar for policy makers, practitioners and academics. Institute of Education, University of London, February 2003.

‘ Shared Spaces: Informal Learning and Digital Cultures’ Rebekah Willett. Seminar at the Centre for the Study of Children, Youth and Media, Institute of Education, University of London, December 2002.

‘ The computer as a space for learning and play’ Julian Sefton-Green. EU Media Guide – Copenhagen, December 2002.

, ‘ Going Digital: Media Education and Digital Media Production’ David Buckingham, Andrew Burn and Rebekah Willett. Video conference presentation for the ‘Kommission Medienpädagogik der Deutschen Gesellschaft für Erziehungswissenschaft (DGfE)’, Berlin, October 2002.

‘ Going Digital: Consuming and Producing Digital Arts’ Andrew Burn, Julian Sefton-Green and Rebekah Willett. British Educational Research Association Annual Conference, Exeter, September 2002.

‘ Playing, learning and Teaching: Kids in Chatrooms’ Rebekah Willett. International Toy Research Association Conference, University of London, August 2002.

‘ Playing, learning and teaching: Kids as Consumers and Producers of Digital Culture’ Rebekah Willett. Multimedia Pedagogic Technique, Stockholm University, June 2002.

‘ ICT and Informal learning’ Julian Sefton-Green. Danish University of Education, Copenhagen, May 2002.

Publications

‘ Living and Learning in Chatrooms (or does informal learning have anything to teach us?)

’ Julian Sefton-Green and Rebekah Willett, *Éducation et Sociétés* (2003) vol. 2.

‘ New Models for New Media: Young people learning digital culture’ Rebekah Willett for *German publication, Medienpädagogik 4*.

‘ Informal Learning: substance or style?’ Julian Sefton-Green *Teaching Education* (13) 1

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