Children Exploring a 'Fun' Web-site: Sites of Learning and Roles of Being

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Abstract

This paper draws on the evaluation of an 'edutainment' web-site for seven to eleven year old children. Learning Indicators were developed from recent research and used as a framework for data collection to 'track' learning. The paper discusses the nature of children's learning, GridClub and the impact of teachers and parents in mediating (enabling or constraining) their experience.

Keywords: elementary education, social contexts, networks, sites of learning, roles and relationships.

1 Introducing GridClub

GridClub is an educational service for seven to eleven year old children provided on-line by a partnership of Channel Four Television (4Learning), Oracle and Intuitive Media, on behalf of the UK Government. It is intended to extend children's learning opportunities beyond the school day as part of the national drive to raise standards.

GridClub contains:

- a portal with an extensive suite of resources, and 'edutainment' games covering all the areas of the National Curriculum;
- a password-protected 'clubs' site, within Oracle's well-established 'Think' learning environment, where children can contribute articles and respond to activities, as well as sending e-mails and 'stickies.'

Key features of GridClub are:

- its design and 'branding' with a meccano-like surround and brightly coloured images to make it attractive to young children;
- its status as a 'safe site' for children, protected by means of schools taking responsibility for authenticating each child's identity before he/she can become a member and be given a password.

GridClub is designed to provide a form of supported, curriculum-led but informal learning for children. The support takes two forms. One is through the design of the games, reference materials and activities provided and the other is through children's participation in a series of clubs, with adult 'mediation.'

2 A Child's Experience of GridClub

Children using GridClub did not, of course, all have the same experience, but for some it offered significant new opportunities as this extract from an interview shows:

> *Imogen: With stickies, if you manage to do it right, you can put pictures on or moving words that go through the screen, then disappear, and then they come back on again, and then they disappear, and then they come back on again. And I sent a note to [a moderator] asking how she done it and she replied something like, 'Hi Imogen! If you click on this icon (and it's got that underlined) then you can do what you want to do and you can put pictures and smiley words on,' and so I clicked on it and then you get all these instructions. You can print out the page so you know how to do it or you can put it all in a blue print or whatever that's called and then you click on 'Copy' and then you go to your sticky and then you click on um 'Paste' and then you have, or whatever way it is, 'Paste' then 'Copy', and then…*
>
> *Evaluator: But why is it important to have an image and moving words?*
>
> *Imogen: Because it makes it fun. Your friends think oh this is good, maybe I could try and copy it and at the same time you're learning how to do things on the computer.*

3 Research Strategies

The research strategies included:

- Working with Key Informant (KI) schools to give direct access to GridClub users, their teachers and parents. This enabled the data collected on-line to be complemented and validated by comparison with data collected face-to-face.
- Collaborating with children so that GridClub could be judged in terms of children's culture, to see if the brand was attractive to the age group.

- Measuring the impact on learning by developing Learning Indicators in consultation with parents and teachers and using these to analyse data collected in a range of ways, including observations of children using the site, interviews and focus groups with children, children's mind maps and scrutiny of on-line activity.

4 Researching Learning

Researching children's 'informal' learning with Grid Club offered us a rare opportunity to define learning broadly. Research into children's learning should always take into account the full range of their experiences, but in England the school as a context of learning, including the technology of attainment targets and high stakes testing, has significantly constrained their experiences in recent years. Home and school have, as a result, become increasingly separate as sites of learning and children have seemed to lead parallel lives. The remarkable extent and variety of children's experience as users of the internet, including e-mail and 'chat,' and downloading of music and pictures, has been largely reported as taking place at home, while the focus of ICT use in schools has been on teaching ICT skills, usually regardless of children's prior experience (Downes 1999, Furlong, Sutherland, Furlong and Facer, 2000, Somekh, Lewin *et al*. 2002).

We began by reviewing recent research on learning. In contrast to the focus of education systems in English speaking countries on linear conceptions of learning, researchers have been most strongly influenced by socio-cultural conceptions of learning and a constructivist view of knowledge. We developed a set of Learning Indicators based on six key themes from this literature:

- Learning to Learn (Claxton 2000) in which children are given opportunities for different styles of learning, in environments with the characteristics of learning organizations, and learn to display resilience, reflection and resourcefulness.
- Developmental Assets that provide environments that promote learning at its fullest, e.g. those which promote 'positive identity' and support 'other adult' relationships (Search Institute 1998).
- Communities of Practice in which children start by being 'apprentices' and develop into experts by working alongside others who already have expertise (Lave and Wenger 1991).
- Fun and Play as means of heightened motivation and exploration.
- Being and Becoming as contrasting states whereby children may be respected as individuals and constructed as independent ('being') or regarded as immature / needing protection and constructed as dependent ('becoming') (James and Prout 1997).
- Flow as the state of heightened engagement in which human beings lose sense of time and place and learn (work) most creatively (Csikszentmihalyi 1996).

The Learning Indicators were then used as a means of structuring data collection. They varied considerably in their focus, the first two being very broad-ranging, the last very specific. Two—'fun and play' and 'flow'—were not in themselves sufficient to indicate learning, but when coupled with other indicators clearly had a 'multiplier' effect. All of them required us to use our judgment as researchers, by interpreting the extent to which particular data provided us with evidence that an indicator was present. Taking this into account, a simple matrix was sufficient to check whether the data we were collecting would be likely to provide the evidence we needed. This enabled us to develop specific methods of data collection to 'track' each Learning Indicator: e.g. concept maps of 'Being in GridClub' to explore whether or not children experienced GridClub as a 'community of practice'; and interviews to collect 'flow stories' to enable us to identify the kinds of activities associated with 'flow.' Video observations were added to the planned data collection when a gap was predicted in data likely to provide evidence of Learning to Learn.

5 'Flow' as an Indicator of Children's Learning

We interviewed children, looking for evidence of their 'flow' experiences when using GridClub. Could they remember experiencing 'flow'? and what exactly were they doing at the time? Almost all the children knew what was meant by 'flow' and were able to give examples:

> *'I was at home and I was on Zooglebust. You get different scores to go to places like Italy... You have to go through a maze to get somewhere… It's like I'm playing as a Roman. I'm at home and I have all these things around me and I've got a computer in front of me but I felt like I was somewhere else.'*

> *'It's like having your head in the computer and your eyes and nose and mouth, but your hands are outside doing things.'*

Many told stories about failing to hear an adult ask them to log off GridClub because they were so absorbed. Another common story was about forgetting to stop at an agreed time. The level of engagement was confirmed by repeated accounts of children missing their favourite television programmes because they forgot the time.

The stories fell into two kinds, depending on whether GridClub was being used at home or at school. At school, children said they frequently were interrupted in a flow experience because time had run out. Sometimes this happened at home, because parents wanted them to stop for a meal, or to go to bed. The more common experience at home, however, was of spending much longer on GridClub than intended and being surprised to find out that they had missed doing something else they had planned. These stories involved spending anything from 15 minutes to an hour longer than intended on GridClub.

Children said it was annoying to be interrupted and told to stop when they were experiencing flow (in one case it was 'embarrassing because everyone else had left the room'). One parent confirmed that her daughter was,

'annoyed if she gets stopped on the computer, when she feels that the flow's broken.' Another parent said, 'They don't care you know that they've got something else to do. They go on there and they lose themselves.'

Children reported experiencing 'flow' when playing all kinds of computer games, including those on GridClub. This evidence was reinforced by many accounts of 'Flow' occurring in association with features common to computer games: trying to complete a task and get to the next level, competing against the clock, solving a problem, answering 'lots of questions' to get a high score.

'Flow' also occurred in relation to a different kind of experience, associated with the 'Clubs' site within *Think,* in which children appeared to be engaging in higher level tasks such as finding things out, working on a personal web-site or contributing to debates ('I was so involved in making a debate that I was like, "Uoho!" when I was told to stop).'

The differences between the 'flow' stories at home and at school are more significant than they at first seem. 'Flow' as described by Csikszentmihalyi (*op. Cit.*) is a feature of high level, creative engagement and most adults' accounts of 'flow' include spending more time than intended and experiencing a high degree of satisfaction and accomplishment when a task is completed. 'Flow' interrupted is not likely to be beneficial; hence the short time spans for using GridClub at school would appear to undermine learning significantly.

6 'Being and Becoming' as Indicators of Learning

We defined the difference between 'being' and 'becoming' mainly in terms of children's level of independence and their resulting enhanced self-esteem. This was a feature of how the learning environment—and the adults who mediated it—constructed childhood itself. GridClub offered an environment in which children were empowered to create their own web pages, communicate by email and 'live talk' with other children, and enter competitions to win certificates and sometimes prizes. However, the extent to which they were able to take advantage of these opportunities varied significantly according to the nature of their relationship with the adults who provided the framing context for their GridClub use. This varied widely between schools and presumably also between homes, although without visiting homes this was more difficult to establish.

At school, the rules that governed use of GridClub varied: for example, in one school children aged between eight and nine said they were unable to reply to emails received within the Club's environment because 'we have to do it to people in the room … we're not allowed to send any to other people yet.' An eight year old pupil in this group, who had become an experienced user of email at home, was instructed by the teacher to send an email to everyone in the class and later reprimanded when the teacher noticed that he was composing an email to go to someone else.

This was only a temporary rule for the younger children, as could be seen by a ten year old child in the same school who spoke of sending something to his email address at home because 'I can't save it at school'. Nevertheless, this example too suggested a constraining environment where the importance of children being able to save their work did not appear to have been considered. In this school children also showed they were very conscious of the dangers of email and didn't appear to distinguish between using email within the GridClub environment or outside, seeming generally timid about communicating. This was surprising given the emphasis on safety that is part of GridClub's marketing.

In another school, the computer facilities were more extensive and children were able to spend time in 'computer club' much more frequently than in the first school. (All children had a chance of attending every day, whereas in the first school only one group had been selected to attend the computer club during the lunch hour, which took place just one day a week—and was sometimes cancelled.) The nature of use was generally very different in this second school. This was partly, of course, a result of the much better access to facilities, but the teachers' expectations of the children's independence and their enthusiasm for giving them freedom to explore GridClub were also very significant factors.

The visual and auditory nature of the site was generally novel and motivating. Feedback was often immediate and children in the schools where GridClub use was well-established worked hard for rewards such as certificates. In those schools, children who had created their own web sites within the password-protected Club site used them to project their chosen image, with a clear link to high self esteem. In one school the ICT coordinator provided the children with many of the features of a learning organization by the way that he mediated their use of GridClub. It was clear that GridClub motivated them, provided authentic feed-back and meaningful rewards; and that through its use the children were able to build their self-esteem. The GridClub environment gave this teacher a tool which helped him to break down some of the constraints of the formal education system and construct childhood as 'being' rather than 'becoming.' in line with his own pedagogical aspirations.

7 An Exceptional Chance for an Exceptional Child

The GridClub environment provided very different communities of practice depending on the community of practice that existed in the physical location of use. Intended in its original conception as a web-site for children to use at home, we observed a shift towards GridClub being seen more and more as a computer club activity at school. The relationship between the children and the teacher (always the ICT co-ordinator in our 'Key Informant' schools) was often, therefore, a decisive factor. However, GridClub remained a resource available to children who had good access to the internet at home and an encouraging parent. Jacob's story provides an interesting example.

Jacob, aged eight, was one of only three children in his school who had found out (for themselves) how to send 'stickies'. He ticked the highest box on the questionnaire saying that he had sent 'between 51 and 100 stickies'. In the group interview he was careful at first not to claim to be more proficient than the other children, saying that he had trouble forgetting his password, but towards the end of the interview his enthusiasm and pride burst out:

> *'Bridget, do you know when I go on Grid Club, I go onto these things and I have a whole bunch of emails and I send about 15 stickies and that's each time I go on there. (You do? You didn't tell me that.) I do send stickies, but not often, because I've stopped going on there because I find my hands hurt when I keep on sending them. (Do they?) Sometimes it gets irritating. (What gets irritating?) Going on the internet, going onto Grid Club and then you don't go in places that you're doing it for and then you realise you've got about 20 emails.'*

This testimony is extraordinary not merely because it confirms that Jacob has mastered the GridClub environment way beyond the capabilities of either his class-mates or the older children in the school, but because it shows that he has begun to experience all the familiar problems of frequent users—how to cope with the work when you get too many emails; and how to avoid getting distracted into doing something other than you intended when you go on-line.

Jacob's mind map of 'Being in GridClub' focused predominantly on positive identity, shown by the large image of himself with arms raised in the air and the words 'happy', 'joyful', 'cool' and 'fun' surrounding the computer (Figure 1). In his presentation to the class, he explained one of the links, 'a bit unhappy,' as being about forgetting his password. He also associates having fun in GridClub with learning, shown particularly in the image on the left hand side which he explained as 'This is the brain where the imagination is growing bigger' and which he has placed just above an image of himself about to climb a tree because 'tree climbing is fun and enjoyable'. The link with GridClub, he explained, was because 'GridClub has got games on.'

Figure 1: Jacob's Mind Map

The exceptional experience that GridClub offered Jacob was also very much appreciated by his mother who saw it as an extension of his learning at school:

> *They are doing work at school and he comes home and he carries it on and he picks up from it. I can see the difference in terms of his writing for example and how he constructs sentences you know, and stuff like that. (...) He's created in the last couple of days—and I think this comes about from him getting comfortable using the computer—even though we've always had one, he's never been on it as much before—and now he's creating certificates and letters in terms of this club and that club. (...) I have seen him doing that and it's fantastic.*

Jacob's success was very much his own, by her account. Happy to take the role of a novice observer she provided one of the ideal kinds of adult mediation:

> *'I don't actually stand over him and watch as he opens it up and stuff. I'll observe as he's doing stuff and I'll say "Oh what are you doing?" that kind of thing. I take an interest, but he's quite good at it, he's better than me.'*

Jacob's account of his use of GridClub shows an eight year old child's lack of awareness of the significance of his achievements. His motivation is largely pure enjoyment, but he is undoubtedly pleased that someone has come along to ask him about this activity in which he knows he excels because he is constantly in demand by other children asking him to help them.

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Short Biography of Presenter

Bridget Somekh has been involved in research in ICT in education since 1984. Her work has included action research projects and evaluations for the UK government. She is currently researching young children's understanding of the role of computers in their world using methods such as interviewing and concept mapping.