Gaming for reading

A feasibility study on the use of video games to engage adults with low literacy in reading for pleasure

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The Reading Agency has been funded by the Department for Business, Innovation and Skills to undertake this study as part of its ongoing work to promote the use of reading for pleasure to engage, motivate and support adults with literacy needs.
Executive Summary

1. The Reading Agency is an independent charity, founded in 2002. Our mission is to inspire more people to read more in the belief that reading can have a profound effect on people’s life chances. We run national programmes for audiences of all ages and abilities including adults who struggle with reading.

The main focus of this study is how the scale of engagement achieved by the £1 billion gaming industry can be brought to bear on this country’s adult literacy skills deficit – a stubborn problem that urgently needs some creative solutions. We are looking at the potential for games, ranging from those created for educational purposes to commercial games accessed online, on games consoles or on handheld devices, to engage adults in an enjoyment of reading and to support their skills acquisition at the same time. And we are exploring how our successful Six Book Challenge scheme for emergent adult readers, launched in 2008, might be enriched with a gaming or digital dimension.

In order to do this we have looked at existing research, carried out our own review of games in relation to their accessibility for adults with literacy needs and their potential to encourage reading for pleasure, and surveyed and interviewed learning providers, games developers and publishers.

2. Although limited, existing research indicates that digital technologies are having a significant beneficial impact on learners and on the practitioners who work with them and can be linked to supporting literacy skills.

3. A simple readability assessment of a small selection of games shows the majority to be accessible to adult readers with literacy levels of Entry Level 3 to Level 1, which is lower than the average novel.

4. Together our survey findings and case studies indicate a positive attitude to games and other digital technologies from practitioners working in settings as varied as literacy classes, libraries and prisons and with a variety of audiences.

5. Games developers have a very immediate interface with their audience and have found a way of selling digital content to committed gamers of all ages worldwide. Publishers have to embrace the digital world if they are to maximise their authors’ work and to reach new audiences. The common ground between developers and publishers in promoting an enjoyment of reading text in all its forms is ripe for further collaboration in order to reach new audiences.

6. Key recommendations

- **For games developers**
  Consider ways in which you could maximise the links between gaming, audience engagement and enjoyment to motivate and support adults who struggle with reading.

- **For learning organisations**
  Be aware of the potential of all types of games to engage your learners and motivate them to try out new skills and to keep practising them.
• **For researchers**
  Continue to investigate the impact of all types of gaming on people’s engagement, motivation and progression, in particular those with literacy needs.

• **For publishers**
  Consider how you can use and adapt your printed content to a range of formats, including games, in order to appeal to less confident adult readers.

• **For policymakers**
  Include the potential of creative gameplay and other digital technologies to engage otherwise alienated learners in policy development for formal and informal adult learning.

### 7. Next steps

The Reading Agency will take this work forward by:

• Setting up a working group in order to integrate the use of gaming and other digital technologies into our Six Book Challenge scheme and our other work with adults with literacy needs. We invite games developers, publishers and learning specialists and providers to get in touch if they would like to be involved.

• Relaunching our First Choice Books database at www.firstchoicebooks.org.uk to include all kinds of printed and digital material, including games, for readers from Entry Level to Level 1.

• Continuing to work closely with publishers to ensure the provision of appealing texts in a range of formats for adults at the start of their reading journey, linking this to our new work on reading for pleasure for Entry Level learners funded by the Esmée Fairbairn Foundation.

• Continuing to work closely with the public library sector to encourage partnership with learning providers and access to a full range of reading materials, including games, for less confident adult readers.
Chapter 1: Redefining reading

“I think we could and should try to make books ring. Make them time bound, make them feel urgent, exciting, something interactive.”

Naomi Alderman, freelance author and games developer

Introduction

Thousands of adults, of whatever age, are turned off by the very idea of reading. This may be because they have very poor literacy skills and every word is a struggle. It may be because they hated reading at school and have managed to avoid it ever since. It may be because life seems fine without it and reading is simply ‘not for me’.

Over half of adults (56%) have literacy skills below the level of a good GCSE.1 The Labour government invested more than £5 billion in its Skills for Life strategy launched in 2001 and targets for learner achievements have been exceeded with 2.8 million gaining nationally recognised qualifications by 2008. But as the skills required to navigate one’s way through life successfully in a world full of communications choices become more complex, so the need to find new and creative ways to engage people in their own learning journeys is more pressing.

People’s image of reading is strongly linked to books and, within that, novels. Asked if they are readers, people will often answer in the negative before revealing that because they have a passion for fishing, motorbikes or folk music they look regularly at a specialist magazine or website but clearly don’t consider this to be reading. Similarly they are unlikely to think of online activity such as emailing, surfing the web or playing games as reading and yet quite sophisticated literacy skills are required to do any of these things with confidence.

So, with the explosion in the use of technology in all forms, what is the relationship between recreational reading or reading for pleasure and online content? Can the appeal of gameplay be used to engage people who wouldn’t otherwise tackle text? And can these digital technologies be a stepping stone towards improved literacy skills?

Reading for pleasure

The Reading Agency is an independent charity, founded in 2002. Our mission is to inspire more people to read more in the belief that reading can have a profound effect on people’s life chances. We run national programmes for audiences of all ages and abilities including adults who struggle with reading. We work closely with the public library service because of our shared values of democratic access to reading. We broker national partnerships for libraries with publishers, businesses and broadcasters and encourage library services to work at local level with schools, colleges, adult education, prisons, trade unions and the third sector.

For this study we are taking the broadest definition of reading to encompass the extraction of meaning from text whether printed or online and whatever the context. In line with Reading for Life, which came out of the 2008 National Year of Reading, we mean

all types of text, including that in games.² By ‘reading for pleasure’ we mean reading that is dictated by individual choice, encompassing fiction as well as non-fiction.

We are also making a link between reading for pleasure and the acquisition of literacy skills. This is based on the growing body of research evidence that demonstrates how reading for enjoyment can increase people’s motivation and self-confidence at the same time as improving their skills – thus creating a virtuous circle.

Our research into libraries’ use of reading for pleasure with adults with literacy needs indicates that it can make a real difference to their motivation to learn as well as developing their confidence and skills.³ Practitioner-led research carried out by tutors in Essex showed that reading for pleasure helps to increase enjoyment, self-confidence, motivation and functional literacy skills and that it is well supported by the expertise and resources of libraries.⁴

Based on this evidence, we’ve experimented with a range of tools to support libraries to work with partner organisations that have direct contact with adults with low literacy. These include a quality improvement framework, a unique searchable database of selected titles at www.firstchoicebooks.org.uk, training and practitioner networking. Our most significant success has been with an annual incentive scheme, the Six Book Challenge, launched nationally in 2008 – www.sixbookchallenge.org.uk The Challenge is a simple but powerful tool that invites less confident adult readers to read six books and record their reading in a diary in order to be rewarded with a certificate. In 2010 it is being run by over two-thirds of library services across the UK working in partnership with adult community education, colleges, the WEA, family learning, prison education and trade union learning reps in workplaces. With 9000 participants in 2009, we hope to increase this total by at least 25% this year.

An evaluation of the impact of the Six Book Challenge in 2008 endorsed our findings about the motivational power of reading.⁵ Nearly all (94%) respondents reported a sense of achievement and 88% felt they gained something – a new or renewed interest in reading, use of the library, introduction to different reading material and progress with their reading and writing. 60% felt that their literacy skills had improved – a benefit endorsed by tutors.

So if reading books can have this effect, can the same be achieved through reading text in other forms and for other purposes? Can the impact of a scheme such as the Six Book Challenge be enhanced with input from creative thinkers in the gaming world?

Aims of this study
The main focus of this study is how the scale of engagement achieved by the £1 billion gaming industry can be brought to bear on this country’s adult literacy skills deficit – a stubborn problem that urgently needs some creative solutions. We are looking at the potential for games, ranging from those created for educational purposes to commercial games accessed online, on games consoles or on handheld devices, to involve adults in an enjoyment of reading and to support their skills acquisition at the same time. And we are exploring how our successful Six Book Challenge scheme might be enriched with a gaming or digital dimension.

However we have set this investigation in a broader context of the use of other digital technologies by learning providers and learners – everything from mobile technologies to blogging. What dictates the choices made by learners themselves? And what factors do learning providers take into account when selecting which technology to use with their learners?

In order to do this we have taken several approaches:
• investigated existing research and related studies
• carried out our own review of games in relation to their accessibility for adults with literacy needs and their potential to encourage reading for pleasure
• surveyed learning providers to:
  - explore attitudes to the use of gaming and other digital technologies with learners
  - identify interesting current practice and gather case studies
• talked to games developers about their awareness of how gameplay approaches can link to reading for pleasure and adult literacy
• talked to publishers with an interest in adult literacy about the potential of digital texts to reach new audiences

Issues for adults with literacy needs
The research findings about the impact of reading for pleasure quoted above are based on an assessment of the impact of reading printed text and books in particular on adults who are able to read but who have yet to develop experience of choosing, reading and talking about books. Often referred to as ‘emergent’ readers, these are people who are not necessarily currently involved in literacy provision but who are likely to be at Entry 3 or Level 1 in Skills for Life terminology.

Several initiatives have focused on this audience (e.g. The Reading Agency’s Six Book Challenge and our First Choice Books database, the Quick Reads publishing initiative for emergent readers (www.quickreads.org.uk), the BBC raw campaign) resulting in a greater, though still limited, range of books for them to choose from. Audio and large print versions of these titles have been produced but ebook versions have only been made available with the launch of the ten new Quick Reads in 2010.

Increased attention on emergent readers has exposed the dearth of reading materials for adults at the lowest level of literacy despite the efforts of a few small publishing companies and websites designed to share teaching resources between practitioners. The Reading Agency will be carrying out action research in this area during 2010-11 working with libraries and learning providers in Warrington and Essex. This work, funded by the
Esmée Fairbairn Foundation, will encompass use of web-based material, and possibly games, in addition to printed text.

Innovative use of digitally-generated materials, such as that contained in video games, could well supplement the paucity of engaging reading matter for adults who are just embarking upon their reading and learning journey. There are, however, several factors to be addressed in relation to the use of computer games and other digital content with adults with literacy needs.

The Reading Agency has developed criteria for selecting books suitable for adults at Entry 3 to Level 1.6 These include use of a ‘hook’ to entice readers into a work of fiction or high-interest content for non-fiction. They also require an assessment of the readability of the text with the use of the adapted SMOG (Simplified Measure of Gobbledygook) formula which makes a calculation based on the number of multi-syllable words in random extracts from the text.

Other criteria concerns the appearance of the text. The book should be less than 200 pages in length and have a clear typeface of minimum 12 point in size. The pages should not be too dense and the cover or any illustrations should be strong and appealing to an adult audience.

Use of digital content can get round some of the accessibility issues of print successfully. Most PCs and handheld devices have the facility to enlarge text and change the background to suit the reader. Similarly the font size on ebooks can be altered. But developers working on digital content for adults with low literacy will need to bear in mind length, appearance and readability of the text they include.

In the digital world, Jakob Nielsen, a world-leader in usability design for web, has identified that lower-literacy users exhibit different online behaviour to higher-literacy users. Lower-literacy users ‘plow’ text, where they read every line word by word. They are unlikely to scan text, such as navigation options, they read every word or skip large chunks of information. He recommends web designers should simplify text, prioritize information, avoid animated text, simplify navigation and optimise search.7

The other issue around accessibility concerns the availability of gaming and other digital technologies in the places used by learners and their tutors. Although this is on the increase (see Chapter 2) it cannot be taken for granted.

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Chapter 2: Existing research

“Digital games are, at their heart, problem solving spaces that use continual learning and provide pathways to mastery through entertainment and pleasure.”

James Paul Gee, academic and writer

One of the drivers for making the link between the use of computer games and reading for pleasure is the popularity of games and their widespread use. According to the 2009 UK National Gamers Survey, carried out by the market research firm TNS Technology, 73% of the British public play games regularly.8 As access to and engagement in games grows, whether it be via the TV or PC screen or a handheld device such as a Nintendo DS or Sony PSP (PlayStation Portable), they are being taken increasingly seriously as a way of supporting skills development alongside other digital technologies.

If games are to be used as a regular technology in adult learning settings, however, access is clearly an issue. Becta, the government agency responsible for ensuring the effective and innovative use of technology throughout learning, carries out annual surveys on digital technologies in the further education (FE) sector on an annual basis as part of their Harnessing Technology programme. The most recent of these reports states that there has been “a considerable increase in the integration of technology to support learning, teaching and management”.9 One third of FE colleges are now classed as ‘mature’ in their use of technology whereas there is a more mixed picture in Adult and Community Learning because of the varied nature of the sector.

Becta has now begun to look at the use of games within FE settings with its first survey to include these statistics published on 31 March 2010. This indicates that these are not widely used within colleges with only 6% of practitioners saying that they use gaming consoles for half their time or greater. Even if handheld devices are added in, that figure rises to no more than 15% of practitioners at most.

The impact of gaming

The main focus of existing research into the educational impact of gaming has tended to look at its use in school rather than further education settings and yet video games are derived from simulations designed for learning in fields as diverse as defence, health care and science. As Graham Brown-Martin, Director of Learning Without Frontiers and of the Games Based Learning conferences, says: “Academics are only just beginning to wake up to their potential. Inspired teachers need to use them and give people reasons to learn. Reading a book still has elevated status. Young people find their way through video games whether or not they read. With the sheer numbers of people playing games like World of Warcraft there must be some with literacy issues.”

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**Adult informal learning**

Futurelab, the Bristol-based not-for-profit organisation that develops innovative learning resources and practices using technology, has explored the use of gaming in relation to adult learning. This was part of a larger study on the possibilities for adult informal learning with technology commissioned by BECTA to support the consultation process in preparation for publication of the government’s Learning Revolution White Paper in March 2009. A range of scenarios includes the use of the Nintendo Wii Fit by a 72-year-old female stroke patient in a care home who wanted to improve her health and become more mobile. Other scenarios looked at family learning and how parents can support their children’s safe use of online virtual worlds.

Their conclusion is that technologies clearly have “the potential to add significant value to adult learning of all types. They can enhance, complement, support, boost and deliver the learning that takes place in a variety of locations from the evening class to the home. However, the potential of digital technologies in this area is not always clearly recognised and there is a continuing need for policy to champion this added value.”

An earlier study by Futurelab on the use of computer games in school settings, makes a salutary point with equal resonance for the FE sector: “The introduction of games into existing school contexts is unlikely to provide a ‘magic bullet’ to issues of disengagement and disaffection with learning. While both students and teachers report high levels of engagement and motivation in game-based learning, a number of technical, pedagogic and organisational issues will need to be addressed in order to ensure that these resources can be used for maximum benefit for teachers and children.”

**Mobile technologies in FE**

The Mobile Learning Network (MoLeNET), a unique collaborative approach to supporting and promoting mobile learning funded by the Learning and Skills Council and the colleges involved, is unusual in that it focuses its main effort on the further education sector. The mobile technologies being trialled include handheld games devices such as the Sony PSP and Nintendo DS as well as mobile phones and links to virtual learning environments (VLEs).

The Learning and Skills Network (LSN) has just published a study of how games technologies are being used for learning in a number of colleges sites as part of the MoLeNET programme. In addition to 35 case studies and teaching and learning snapshots from the first two phases of MoLeNET projects between 2007-09, this provides a useful contextual background drawing on the main literature about gaming and learning. It refers to the distinction between two main types of digital games made by Prensky – ‘complex’ games that require a wider skill set and tend to engage the player

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more intensely as compared to simpler ‘mini’ games – and makes the point that games not specifically designed for educational purposes can nevertheless prove effective for teaching and learning because they engage the player and support and encourage their learning. It also suggests that digital learning games that have been created for educational purposes are becoming more effective teaching and learning tools as they take on some of the characteristics of complex games such as ‘worthwhile goals, decision-making and adaptivity’ to the player’s skills and abilities and the capacity for players to connect with other users. This echoes points made by the American academic James Paul Gee about the ‘deep learning properties’ of commercial digital games “in the sense both of learning to play the game (and the content and skills thereby involved) and of creating commitment and attachment to play and learning in the game.”

Having studied use of digital learning games on handheld technologies in several colleges involved in the MoLeNET project, the authors’ conclusion is that “Games technologies appear to be particularly valuable for supporting and motivating disengaged learners; learners with learning difficulties and/or disabilities; and learners with numeracy or literacy development needs. They provide an enjoyable and engaging experience that can help to create an environment which is conducive to learning, with fewer behaviour management issues and improved group dynamics. The technologies themselves are generally easy to use and provide flexible and varied opportunities for accessing, delivering, recording and assessing teaching and learning.”

Learners themselves make interesting comparisons between the commercial games they might play at home on consoles as opposed to those provided on the Nintendo DS for the project. For many their favourite ‘recreational’ games were those where the subject matter interested them “such as animals, sport or exercise, or had characters they could relate to”. They liked the fact that games included elements of challenge and competition and that they were realistic, interactive and motivational. When pressed, they recognized that they could learn from these games but they felt that the games used on the DS Lite for the project were more relevant to the knowledge and skills required at college. One learner felt that the DS games more successfully disguised their educational content than other digital learning games available on the PC and that they ‘treated him like an adult’.

Several of the case studies focus on numeracy and demonstrate how games such as Professor Kageyama’s Maths Training can encourage students to practise their skills and compete against each other. More relevant to literacy is an example from Sheffield College focusing on the benefits of using the Nintendo DS with ESOL learners, particularly aged between 14 and 19. The learners began by using Dr Kawashima’s Brain Training games (to check their ‘brain age’) and numeracy games to get comfortable with the equipment.

The next step was to explore how to develop literacy skills using the ‘PictoChat’ function, a programme built into the Nintendo DS, which allows users to text chat with up to 16 other users via the system-to-system Wi-Fi built into the handheld device. This was used for dictation with a short piece read to the learners, the winner being the person who could accurately text the sentence to the tutor. The learners were also asked to complete

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crosswords on the BBC Skillswise website but not allowed to verbally ask any questions of
the tutor. The tutor only responded to questions that were posed via PictoChat, and he
responded via PictoChat, thus providing an opportunity for learners to practise both their
writing and reading skills.

Learners engaged with the activities enthusiastically and did not need too much support
with them. Younger students were generally more positive than adult learners as the
older learners would have preferred to use specific literacy games on the DS, had they
been available. The tutor felt that the Nintendo DS was a very good resource provided
that there was a choice of games and that it would be possible to incorporate its use in a
variety of lessons, for example providing the opportunity for skills practice and
reinforcement. The tutor felt that the DSs really enabled the learners to become the
centre of their own learning experience and that the PictoChat function made sometimes
fairly dry literacy exercises fun and interactive.

**Virtual worlds**

The use of virtual worlds such as *Second Life* hold great potential for skills development
among learners. Dr Julia Gillen, Senior Lecturer in Digital Literacies in the Literacy
Research Centre at Lancaster University, has been working with the Open University to
analyse from a literacy perspective the use of a specially created island by teenagers.

Julia considers *Second Life* to be a demanding environment for literacy. “Images in the
media can be misleading because they tend to wipe out any text such as speech bubbles
and access to menus, scripting language and maps. We’re still analysing the data but we
can make two main observations: one, that communication between users is mostly by
interactive written ‘chat’ and, secondly, that there is a lot of literacy practice around
what they are doing through bulletin boards, forums and collaboration on wikis.”

“The same is probably true of gaming,” she says. “Whether or not there is text in a game
there’s likely to be plenty of reading around it in order to participate fully, join clans and
search the net for cheats etc. People can play at an ‘entry level’ but there will be a range
of surrounding activities if they want to move on.”

Work on the teen island – the first ‘protected’ *Second Life* island in Europe –
demonstrated that users needed support. “There’s a whole learning process around the
design. We found that we had to set up a buddy system and mediating tools to make
sure that people didn’t get stuck.”

**Technology and reading for pleasure**

The use of technology in relation to reading for pleasure was explored in a recent book15
by the National Institute for Adult and Continuing Education (NIACE). The authors looked
at the ways in which new technology can open up new types of reading material such as
websites, blogs and digital fiction and ways of communicating about them through online
social networks. Rather than technological change being seen as “a contributory factor
in reducing reading among young people”, their contention is that reading for pleasure is
“alive and kicking” and “stands to grow, not diminish, as a result of the power of
technology.” They also suggest that “the use of read-write technologies (or Web 2.0) such
as blogs, wikis and social bookmarking, are a positive incentive for hesitant readers
...” And that “... the use of technology may have a direct impact on several of these

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pleasure.* London: National Institute of Adult Continuing Education
barriers to reading for pleasure, most notably transforming reading from a non-social activity to a social one, as well as enabling a wealth of personal recommendation to outweigh publishers’ reviews and support readers making choices.” They also look at the ways in which technology can remove barriers to accessing text for adults who struggle with the written word or have physical or sensory difficulties.

**Conclusion**

Existing research, although limited, indicates that digital technologies are having a significant impact on learners and on the practitioners who work with them and can be linked to supporting literacy skills. It will be important for all future research to include this dimension and, within it, the extent to which adults with literacy needs have access to and can benefit from support in using gaming and related technologies and how this can help to open up the world of reading for them.

Literacy practices in the home and community are also crucial to an understanding of how people can develop an enjoyment of reading while also improving their skills. David Barton and Mary Hamilton provided an invaluable insight into everyday literacy practice with their study of reading and writing in Lancaster. It is crucial that any future study of this kind includes the plethora of literacy practices emerging around the use of gaming by people of all ages.

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Chapter 3: A review of games

“It was words that first drew me to video games, and words that first gave me a taste of their power.”

Tom Chatfield, author of Fun Inc. Why games are the 21st century’s most serious business

In our survey of learning providers and game developers (see Chapters 4 and 5) numerous different platforms and games are referred to in the context of reading for pleasure. These games fit broadly into two areas: those that are purely for educational purposes (e.g. internet based BBC Skillswise www.bbc.co.uk/skillswise) and those that are aimed at gamers and can be used to encourage reading for pleasure (e.g. console based Guitar Hero music video games).

Educational games

Educational developers such as the BBC (Skillswise), Tribal Education Ltd (Target Skills) or the Learning and Skills Improvement Service (Brain Games) have developed specific games aimed at adults who want to improve their Literacy, Numeracy or ICT skills. These games focus purely on the educational content, for example:

**Image 1: Who Killed Angela Spelling? (online)**

Who Killed Angela Spelling? is a game aimed at helping adults practise the literacy skill scanning for information. Gamers travel round a fictional town called Sleazeville scanning documents for clues and have to solve the crime against the clock.

Readers may come across such educational games through sign-posters such as fellow learners, tutors or library staff. Such games are created on much smaller budgets than those commercially available and are often limited graphically and in game play. The gaming environment provides motivation for gamers to return and achieve the ‘practice makes perfect’ scenario. However Paul Pivec’s critical review of games based learning for Becta found that “most game players do not play educational games, as they do not
believe they learn from such games and do not find the game play... compelling."17 If this is the case, the commercial games market needs to be explored.

West Nottinghamshire College combined the elements of a commercially available game with customisable content enabling them to embed literacy and numeracy tasks into the game play. They customised an at the time popular PC game called *Neverwinter Nights* and Key Skills success rates at the college trebled to 94%18 (see also case studies on pages 26 and 30).

**Commercial games**

With the commercial games market, in financial terms, being the world’s largest entertainment industry and the sales of games increasing at 20% a year19 there is scope for uncustomised commercial games reaching and engaging with our target audience. As previously stated, in particular we are interested in those that could make a real difference to improving adults’ literacy skills.

Through our survey responses we have identified commercial games on the market that could be used with adults to encourage reading for pleasure. Video games fall into many different genres – from RPG (Role Playing Games) through to RTS (Real Time Strategy). For the purpose of this study we have selected and categorised games based on their strengths as characterised by our survey respondents as well as adding in others likely to be beneficial for emergent readers.

In 2009 the Department for Culture, Media and Sport announced that in the UK the PEGI (Pan European Game Information) system would be adopted for classifying games according to suitability for minor protection.20 The ratings do not take into consideration the difficulty or reading level of the game, rather whether it is suitable for a minor.21 No reading rating system exists for games, so for the purpose of this study we have provided a readability level for each game calculated using an adapted SMOG (Simplified Measure of Gobbledygook) formula The Reading Agency use when assessing books for entry into the First Choice Books database for emergent readers.22

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As within traditional education, in gaming, the use of familiar, **real-life contexts** can motivate and encourage players to engage with a game. Contexts can range from real-life simulation such as *The Sims* series, through to simpler tasks like driving or even cooking.

*Cooking Mama* is such an example, a cooking simulation game where players have to select dishes to cook and follow instructions to prepare and cook a meal in a short amount of time. This game is played on handheld devices such as Nintendo’s DS or Apple’s iPhone so the text on the screen does not have an accompanying read audio track, the user must read the words. The minimal text, which has associated instructional graphics, has a readability score of 12.

**Image 2: Cooking Mama (Nintendo DS 2006, iPhone 2009)**

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**Self-improvement** games have proved to be high-sellers in the market, with the most well known brand being Nintendo’s *Brain Training* series for the DS. It’s designed to be played each day, with users first completing the Brain Age Check mode to find the ‘age’ of their brain. Next they can enter the Training mode to aid them in reducing the age of their brain by playing numeracy or literacy based puzzles. During the two literacy based puzzles users have to read aloud from classics such as *Little Women* (Reading Aloud) and count the number of syllables in a word (Syllable Count). The game gave, on average, a readability score of 12.
The popularity of the *Brain Training* series has spawned numerous other video games all aimed at people wanting to improve their skills, such as *My Word Coach* that is meant to help players with their verbal communication and vocabulary.

The scientific validity of such games have been discussed endlessly in the press, though Nintendo have been keen to distance themselves from scientific claims by stating that they are just in the 'entertainment business'\(^\text{23}\). As scientific evidence is lacking, the BBC is currently running the biggest ever trial of computer-based brain training to see if it really works, with the results to be revealed in 2011\(^\text{24}\). Nevertheless, this hasn’t stopped the concept being picked up and used in schools, colleges and even prisons as a way to help people develop their literacy or numeracy skills:

> “Children who were behind in numeracy using traditional methods of teaching were able to catch up with their peers within a very short space of time using Brain Training...Offenders are allowed to use PlayStations for games, so it seems reasonable, in principle, for other digital equipment (such as Nintendo DS) to become available through the prison library for numeracy and literacy learning. We would recommend this is done on a trial basis in a small number of prison libraries and with the involvement of literacy providers.”

*BRC Learning in Custody: Report of the Offender Learning in Custody Workstream\(^\text{25}\)*

In 2009 LSIS (Learning and Skills Improvement Service) launched *Brain Games*, specifically aimed at adult literacy and numeracy learners. The online or downloadable game uses

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the context of “the addictive game play of ‘brain training’… to engage and motivate learners to succeed”\textsuperscript{26}. Though the jury is still out on the effectiveness of self-improvement games, it’s clear that educators are keen to explore at least their motivational benefits with learners.

As consoles have developed games have become larger in file size allowing audio alongside video. In the past games would have relied on text to be read by the user, whereas commonly these days \textbf{narrative driven adventure games} feature just audio, with subtitles as an option. Below is a screen shot from \textit{The Secret of Monkey Island} originally released in 1990 compared with a graphically updated version released, with audio instead of text, in 2009:


For predominantly audio reliant games, there are still opportunities for gamers to read text through the use of subtitles. For example, the newly released \textit{Heavy Rain} is an interactive drama video game centered around four protagonists involved with the mystery of the serial killer nicknamed the Origami Killer. The game is heavy in drama and dialogue with four playable characters. The screenshot below shows one of the main characters Scott Shelby, in discussion with a female with the subtitle option turned off. The readability of the subtitles for the demo of this game gave a score of 10.

The *Professor Layton* series of games for the DS is one example of an adventure game based around solving puzzles. The storyline and puzzles are tightly integrated and gamers must follow the story and solve puzzles they come across along the way. Being a hand-held based game it relies on text, rather than audio, to tell the story and give instructions. Players have to rely on reading skills (as well as others!) to play these games. The first in the series, *Professor Layton and the Curious Village*, scored an average readability of 11.

*Scribblenauts* is a **puzzle game** that promotes emergent game play by challenging the user to solve problems through multiple solutions. The player controls the character Maxwell who has different challenges, which the player has to solve through the approach of ‘Write Anything. Solve Anything’. For example, with the simple challenge of catching a butterfly you can write ‘trampoline’ for Maxwell to jump on and ‘butterfly net’
for catching the butterfly. There are multiple solutions to challenges meaning that gamers are not limited by their literacy level. In the example given, instead of writing ‘trampoline’, if you wrote ‘box’ for Maxwell to stand on it would still lead to success.

**Image 7: Scribblenauts (Nintendo DS 2009)**

As with some other games, Scribblenauts begins with a training level where the gamer needs to read through a lot of instructional text to learn how to play the game. During the training level Scribblenauts gave a readability level of 12, but later in the gameplay it gave a readability of 10 that would increase depending on the answers given by the gamer.

**Traditional games** have been translated to video games, from *Monopoly* through to card games and puzzles. Their familiarity could make them easier for adults to learn the gameplay and not rely as much on instructional text.

Even recognisable game formats from television have transferred to video games, such as *Who Wants to be a Millionaire?* Changra, a UK based company specialising in educational IT, have adapted the format for use in schools with a large bank of curriculum-based quizzes for all ages and subject areas. The world’s most popular quiz (or game) format is being brought to an educational audience to be used in schools or at home:
"Millionaire for Schools is a thoroughly exciting project and I foresee a great future for it. I know the kids will just love using it - and because of that will also learn from it. It's great for teachers too - high impact, engaging digital resources that are straightforward to use."

Ian McNeilly, Director, National Association for the Teaching of English (NATE)

**Image 8: Monopoly (iPhone 2010)**

The Monopoly game on the iPhone with much instructional text and explanations on the different cards selected comes in at readability of 13. However, its gameplay familiarity may encourage less confident readers to continue through the game play and therefore text. Video games can be played solitary or collaboratively, such as *Wii Sports* on Nintendo’s Wii. When the Wii was launched in 2006 it was named as such to encapsulate the cross-generational collaborative play of the console:

"Wii sounds like "we," which emphasizes this console is for everyone. Wii can easily be remembered by people around the world, no matter what language they speak. No confusion. Wii has a distinctive "ii" spelling that symbolizes both the unique controllers and the image of people gathering to play."

Nintendo

Nintendo were keen to target a wider demographic, encouraging many more new people to play games who would not have traditionally played on consoles. Its ease of use

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means gamers as old as 103 have been using the device\textsuperscript{30}. Potentially gaming collaboratively could have the same positive impact as reading collaboratively\textsuperscript{31}.

**Image 9: Wii Sports (Wii 2006)**

![Wii Sports](image)

\textit{Wii Sports} is included with the Wii console pack. With instinctive game play where players mimic actions of real-life sports such as tennis and the help of on-screen visual guides, the game does not require high literacy skills. During the main play of the game players will come across little text, apart from repeated phrases such as ‘replay’, ‘game’ and ‘you lose’. This gives the game a readability of zero. However, players can enter a ‘training’ arena to develop and practise their skills where they will encounter short instructional text, which gives a readability of 11.

The ‘play together’ approach has been used in the promotion of \textbf{music video games} such as the \textit{Guitar Hero}, \textit{Rock Band} or \textit{SingStar} series. In the first decade of the 21st century, video games moved from the “bachelor pad and into the family room”\textsuperscript{32} allowing gamers to pick up microphones, drum kits and even ‘guitars’ to play along with each other.

The most obvious literacy aspect of music video games are the singing, or karaoke elements. Gamers use a microphone and follow on-screen lyrics to sing along to well-known songs in order to score points. The readability level of these games really depends on the lyrics of the songs chosen. For example, the song \textit{Lucy In the Sky With Diamonds}...
Video games aren’t just played on consoles: they can be downloaded to mobile phones, played online through game websites that are full of hundreds and thousands of small games or massive multiplayer online roll-playing games like *City of Heroes*. In recent years the world of gaming has been shaken up by the rise of social gaming that has an audience of hundreds of millions.

*FarmVille*, a virtual farming game, has over 82 million users signed up. People who are part of the online social network Facebook can choose to join the application *FarmVille*, cultivate their plot of land, rear animals and interact with family, friends and even strangers online. In the same way as the Wii console or games such as *The Beatles: Rock Band* have reached new audiences, so has social gaming. However, in comparison to the million-pound budgets of console games, small flash based online games can be cheaper and quicker to develop and launch. *FarmVille* has an audio soundtrack of music, but as with most handheld games, users have to read text and follow instructions. With *FarmVille* having a low readability of 10, perhaps its accessibility has contributed to its success.

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Conclusion
It should be noted that for this study we have only scratched the surface of the thousands of video games available on the market. A simple readability assessment of games has shown the majority of those selected to be accessible to adult readers with literacy levels of Entry Level 3 to Level 1, which is lower than the average novel. As already identified by other organisations, such as the American Library Association, reading and gaming go hand in hand as “learning the language and mechanics of any game … involves acquiring a new vocabulary.” To motivate gamers to read further, the games don’t stop with playing, there are online forums to discuss game strategies, magazines, ‘how to videos’ on sites such as YouTube and even game-inspired novels. With games developers and traditional publishers starting to turn reading into a ‘game’ (see Chapter 5), there seems to be much scope to explore the use of gaming as a way to encourage emergent adult readers.

Chapter 4: Learning perspectives

“Digital technologies and gaming gives a purpose for adult learners to read for pleasure and is not in some cases as daunting as a traditional hardback book.”

Marie Haworth, Assistant Principal, Preston College

“If games are related to interest, or to certain genres of reading matter, they could encourage further reading.”

Ruth Atkinson, Senior Lecturer, LLU+ London South Bank University

The Reading Agency ran a survey of learning providers (see Appendix 1) in February and March 2010. The aim was to elicit attitudes to the use of gaming and other digital technologies with learners rather than to produce a robust quantitative response.

Despite the small sample of 66 respondents, self-selected by their interest in the topic, some prevalent attitudes are discernible. About three in five respondents claim to use digital technologies regularly with their learners, a third occasionally and the rest have tried it a few times. The most popular technologies are websites and email used by 91% and 74% of respondents respectively. Next come online games (59%), digital photography (44%), mobile phones (26%), texting and social networks (both 24%), ebooks and video production (18%), consoles, handheld games and blogging (all 14%), podcasting (9%) and virtual worlds (6%).

Educational games that support specific skills such as spelling are by far the most popular games used by 88% of learning providers. Much less popular are commercial games (20%), commercial games adapted for adult learners (14%) and game authoring technology (5%).

Learning providers think the biggest benefit of using digital technologies is that they engage the learner. The scope that digital technologies give learners to explore topics that interest them is the next most valued benefit, followed by the support it gives to reading skills, the accessible introduction it provides to text and the relation it establishes with their everyday worlds. The support for writing skills and the encouragement to read more, both online and print, were thought to be the least important benefits.

Limited access to ICT is the biggest barrier to using digital technology faced by learning providers. A lack of confidence and of ideas for using technology are the two next most significant barriers. A lack of time and uncertainty about what would be appropriate for the audience are less significant barriers.

The vast majority of respondents think that there is a need for more digital content specifically for adult literacy learners. But there are several factors to be taken into account to enable learners to make use of ICT. Access to technology, ease of use and clarity of instructions and text are thought to be the most important. Confidence, age appropriate material and the tutors’ skills were also mentioned.

The survey also enabled us to identify a range of interesting case studies on people’s use of digital technologies from very varied settings – see below.
Norfolk County Libraries

For Brigitte Morton, community librarian at Norfolk County Libraries, IT and reading are closely linked. For the last three years, she has run free library sessions teaching people the basics of computers, email and games, and has seen the confidence of her participants soar in a matter of hours. Demand for the courses is high, and Brigitte says much of it comes from people who might otherwise not step foot inside Norfolk’s library buildings. “It’s a great way of reaching people who haven’t used a library before, and we definitely get more customers as a result.”

Having been drawn in by the technology, many users stay to use other library services. Participants must sign up to the library before joining the classes, and Brigitte often takes the opportunity to introduce them to book and magazine stocks, too. “We get many people coming back to read,” she says. “They might move on to a simple computer book or a magazine first, and then start to explore further.” And reading simple instructions on computers can be an important step to literacy, she thinks. “When people tell me that they can’t read a full book, I can point out that they’ve been reading very well on screen—and that immediately raises their confidence.”

Brigitte has a Nintendo Wii so that computer trainees can take part in games in groups, too, and she recalls one particularly inspiring example of how technology like this can widen social inclusion. Having taught the basics of computer use to two separate groups—one from sheltered accommodation, and the other drawn from young offenders—she brought them together for a series of Wii games. That led to deeper interaction between the two groups, with young people visiting the sheltered accommodation and forming discussion and reading groups. “It was a great way of getting together two groups who might otherwise have little trust for one another.”

As with the sheltered accommodation group, many of those joining the computer classes are elderly, and often feel alienated from younger generations by their lack of knowledge of digital technologies. Some also come from very rural locations, leaving them socially isolated. Libraries are ideally placed to improve people’s lives on both these fronts, says Brigitte. “We’ve got the computers and we’ve got the people to make a difference. Libraries are a perfect place to do this sort of work.”

HMP Belmarsh

In prisons like HMP Belmarsh, interactive digital technology is an important learning tool for inmates with few or no English language skills.

Eva Coker, ESOL coordinator at the prison’s college, uses a classroom smartboard wherever possible to stimulate her prisoners’ learning. She loads it with quizzes and games based on recognisable brands like Who Wants to be a Millionaire?, and others such as Sudoku that can be easily learned and completed. The smartboard quickly gets her learners interacting—both with the game they’re playing and each other. “In a prison, that’s an important skill,” she points out. “Prisoners can be very withdrawn and coming to terms with their new environment, and this helps to open them up.”

Games can also improve the vocabulary skills of people who may enter prison with very few English words. “It gets them used to the way English is spoken outside as well as inside the prison,” says Eva. “Just listening [to the whiteboard soundtrack] helps them learn words and their meanings and get used to pronunciation. It makes learning fun.” As learners slowly but surely improve their vocabulary, some move on to books from the prison’s library, perhaps reading stories out loud in groups.
As in many prisons, the biggest barrier to the use of digital technology is time—timetables are irregular and subject to change at short notice, while learners can be moved on to other prisons or released just as they are starting to make progress. “It’s often difficult to know when we’ll be able to get hold of them [prisoners], and that’s frustrating. But whenever we do they always enjoy it.” Her stock of games is limited, and Eva would like to have more educational games that advance literacy—as well as more material that relates directly to her learners’ experiences inside prison.
Fife Opportunity Centres
In Fife, computer games are one of the keys that open the door to learning in its network of Opportunity Centres.

Stephanie O’Donnell, adult basic education tutor, uses a ‘Quest for Learning’ computer package, specially adapted for basic skills purposes from the popular commercial Neverwinter Nights game by West Nottinghamshire College. It gives school leavers and adult learners literacy and numeracy-related tasks to complete within a gaming environment that is perfect for anyone turned off by conventional learning systems.

The package gets users reading game instructions, dialogue and tasks, and they are encouraged to write about their game characters, too. Fife’s evaluations have found that reading, writing and spelling skills have all improved as a result, and success rates in Key Skills qualifications have risen from 22% to 90%.”Because they are already comfortable with the technology, they are much more ready and happy to learn,” believes Stephanie. Relating learning to their interests is an important step, she thinks. “It’s incredibly motivational. Some of our teens didn’t do any reading or writing before they came along, but by the end of the course they were all wanting to show off what they’d achieved.”

It’s not just learning by stealth. “We’re very open with them and explain what skills the games will help them improve and how they’ll do it,” explains Stephanie. She can recall plenty of inspiring stories of how games improve basic skills and change lives. “One man wanted to improve his literacy so he could join the Navy. He used the game to relax into his learning and get rid of the tension around it—and he went on to pass the exam.”

Stephanie uses other educational games based around football and work situations, as well as a game authoring tool for young people—‘Adventure Author’, also based on the Neverwinter Nights franchise—that advances creativity and design and storytelling skills. Having used this technology for four years, she is convinced of its power in the learning environment, and given more time and resources she would gladly base even more work around it. “I’m pretty evangelical about computer games—they really do work.”

Blackburn with Darwen Libraries
Games are an important part of Blackburn with Darwen’s libraries’ offer to young people in their own right—but they are also hooks that pull users in to reading and other activities.

Library officer Angela Robinson looks after a Nintendo Wii that she uses for organised games and library sessions dedicated to young people. It’s an accessible, fun way for young people to play games, she says—and unlike other consoles, it doesn’t exclude anyone from participating.

Games in themselves can improve reading skills, says Angela. “People don’t realise that to play games you have to read a lot.” But they can also lead users on to library membership and other reading materials, she adds. “The lads who come in suddenly realise that there’s a big library for them to look around. We don’t force books on anyone, but many of them start to pick them up for themselves.” She has noticed that graphic novels, science fiction, film-related books are particularly popular gamer choices.

Blackburn’s libraries offer computer and IT training sessions to people of all ages—and a set of brain training games are loaned to the over 50s to help keep minds active—but it is young people who are particularly targeted. Angela also recalls a PlayStation league run
for young people several years ago that involved a Quidditch game. Inspired to find out more, many participants went on to read J K Rowling’s Harry Potter books.

Time, space, money and staff resources are among the things stopping Angela and colleagues for making more use of games—but she is keen to keep engaging in this way with young people who might not otherwise be interested in libraries. "If you don't speak their language you won't get them through the door," she points out. "But if you can move with the times and offer something that appeals, then they’ll feel much more comfortable in the library environment."
South Devon College
For professionals wanting to embrace technology in education, the sort of Moodle e-learning system used by South Devon College will be essential in the future.

Sasha Pleasance, ESOL and literacy lecturer, says her courses are all accessible via the Virtual Learning Environment platform, allowing learners to catch up with or look back on their lessons. That gives learners more flexibility in their literacy development, and greater ownership of it. “We soon saw the potential of the VLE to develop their study skills and encourage them to take more responsibility for their learning,” she says. It also improves confidence with technology—something that will be useful to learners well beyond the classroom. “For many people it’s a totally new way to learn—and a good way for them to pick up useful computer skills.”

One of the most successful spin-offs from the Moodle has been a learners’ blog. It was started by Sasha as a way of keeping in touch with students, but has evolved into a way for learners to talk to one another and put their reading and writing skills into practice. It’s fun, too, Sasha adds, and once students have got to grips with the technology, many progress further in their learning, often onto mainstream college courses in IT and other subjects. “The Moodle really enhances and enthuses learning.”

Getting sufficient access to technology has been an issue for Sasha—as have the mindsets of some educational professionals. More of them need to open up to the possibilities of digital learning and become more ambitious in its use, she thinks. “There are mixed attitudes to technology, and that’s quite a barrier. Some people can be suspicious of it and think it’s a mechanical way of learning. But there’s a whole generation of children growing up with this technology and expecting to use it in their education—it’s the future.”

Chichester College
Students across Chichester College benefit from being part of the MoLeNET project (see Chapter 2) which gives them access to a range of digital technologies to support their learning on courses ranging from hairdressing to GCSE English. Tutor Helene Loizides-Dickson is particularly interested in encouraging students with low literacy or dyslexia to find a way into reading. She has found the Classmate Reader, a handheld device made by Humanware in the US for visually-impaired readers, to be useful for this. A similar size to the Nintendo DS, it is robust enough to be carried in a pocket and used in most settings. It converts text files into audio, showing them on the screen with the words highlighted as they are played. The font size, background colour and audio speed can be changed to suit the user. “They’re an ideal way for less confident readers to access more difficult text and especially fiction,” says Helene, who has encouraged students to read GSCE texts such as Wuthering Heights and Of Mice and Men in this format.

Helene also uses other handheld devices with her students, for example brain games on the Nintendo DS with the PictoChat to encourage skills such as sentence building. This can provide an incentive at the end of a lesson with the students able to compete against each other. She finds handheld cameras useful too, especially for students with poor memory skills, who can record and film practical demonstrations to refer to later.

Essex Adult Community Learning
For literacy and numeracy students without the time or inclination to follow classroom-based courses, web-based learning can be a valuable alternative.
At Essex Adult Community Learning, Skills for Life strategic manager Lesley Cresswell makes ample use of online education platforms, and has eschewed existing resources in favour of a bespoke package that gives learners both structured help and the space to develop themselves. “We wanted to try a different approach and give people the ability to learn in their own environment while also having a tutor on hand to help.” Learners download worksheets from the website and complete them in their own time—with help in the real or virtual worlds if required—before uploading them again to be marked by tutors. They receive an induction into the technology before they start, and have the opportunity to take a national test once they have completed their course.

Tutors can monitor how much time learners are spending on their online work, and Lesley thinks the course offers flexibility all round. “Some people don’t have the time to go to classes, and we can’t be in every single town in Essex. If people are working, or have childcare issues, then this can fit into their lives very well.” Her team is now evaluating the results of the online programme, and technology in the classroom will be the subject of the department’s annual tutor conference in September. But early indicators are positive, and there are plans to extend the learning package to other literacy and numeracy levels. Lesley cites examples of successful outcomes like a learner who was struggling with spelling until becoming engaged by a spelling game for the Nintendo DS that tutors found.

Essex’s tutors make use of other digital resources like the BBC’s Skillswise website and brain training games and Lesley thinks technology has a major role to play in reinforcing classroom learning. “To me, teaching is not about just one resource but a toolbox from which you can choose according to people’s needs and interests.” Attitudes to the use of online and gaming resources in learning have changed, she thinks. “Ten years ago there was some resistance, but technology is such a part of everyone’s lives nowadays that it makes perfect sense to use it.”

**Milton Keynes Adult Continuing Education**

As learners try to improve their literacy levels, podcasts can be a very useful way of gaining exposure to spoken English and educational activities.

That has been the experience of Ann Price, a Milton Keynes-based Adult Continuing Education tutor whose learners come from a wide variety of countries and have an equally broad spectrum of English language skills. She subscribes to Pearson’s *One Stop English series*, which helps guide learners through popular novels—most recently Mark Twain’s *Tom Sawyer* and, for more advanced learners, Jane Austen’s *Northanger Abbey*. Podcasts allow learners to listen to the story being read aloud chapter by chapter, while a variety of spin-off resources like quizzes and TV or film adaptations of the novels provide springboards for discussion.

The resources help to mimic children’s ways of learning English by first listening to it and then speaking it. The podcasts engage interest and show how technology can enhance education, says Ann. “New things like this can be a good way to keep up people’s interests. They really bring literature alive for students.”

Ann also uses various podcasts from the BBC’s extensive directory, including a weekly *Six Minute English* recording from the World Service that teaches English vocabulary in everyday situations. She borrows reading and writing resources and ideas from basic skills websites including BBC *Skillswise*, Talent (www.talent.org.uk) and *SkillsWorkshop*.
(www.skillworkshop.org). “There are such great reading resources out there,” she says. “Since I discovered them we’ve been able to use them in so many different ways.”

**Conclusion**

Our survey findings and case studies indicate a positive attitude to games and other digital technologies from practitioners working in settings as varied as literacy classes, libraries and prisons and with a variety of audiences. Their use of these technologies is imaginative and innovative and provides a snapshot of how they could be implemented more broadly in formal and informal learning.
Chapter 5: Developing games

“Reading is about escaping into an immersive world. Gaming can be another approach to that same world.”

Jared Shurin, gamer and multi-media developer, evidently

The Reading Agency ran a small-scale survey (Appendix 2) to elicit views and experience from games developers who may have considered issues around the literacy level of their users and the links between digital reading and more ‘traditional’ reading for pleasure. We have presented these as short case studies below, before going on to include observations from publishers and first thoughts on how our successful Six Book Challenge might be enriched with an online or gaming dimension.

Dr Naomi Norman, Director of Learning, EPIC

EPIC, the Brighton-based learning solutions company, has 80 projects underway at any one time, many of which include some element of gameplay. “Games have a huge part to play in engaging people and motivating them to keep going,” says Dr Naomi Norman, Director of Learning. “We always structure games to encourage people through scoring systems and feedback.”

The company has recently produced an award-winning game designed to tackle low numeracy skills among Army recruits. Operation Numerika is a scenario-based programme for use on the Nintendo DS, a familiar gaming technology for the user group. It provides simple, contextually relevant games, addressing all aspects of Entry Level 2 numeracy. These build the learner’s ability as they progress through increasingly difficult levels and stores their score, giving them the opportunity and encouragement to improve their performance. Using the games console removes any stigma of ‘homework’, inspires practice, provides immediate feedback and encourages real-life use of numeracy such as dividing rations or ammunition between fellow soldiers.

EPIC has had to gear some of its programmes for users with low literacy such as adults working in palliative care. Carers can listen to short audio stories on the way to work on an MP3 player as preparation for their e-learning. Naomi explains: “The power of story is phenomenal. The key thing is offering support around reading so they don’t feel intimidated – audio or a glossary to click on for unfamiliar words and the ability to choose their own font size. If you’re already feeling under-confident a lot of text can create a downward spiral. They need to be motivated to read a small bit and then be rewarded.”

Although commercial games developers may not be conscious of low literacy as an issue, Naomi feels they are always striving to get the balance right between text and images on the screen. Mobile technology has the advantage of only being able to show a small amount of text at any one time. She can see how a gaming approach could encourage people to read more. “You need to find out two main things – what draws them in and how to keep them engaged. It could be hearing from the author. Then getting them to read a bit and having a game based around a chapter or extract with a reward at the end. The trick is to find the right route through the learning.”

Claire Bateman, games developer

Games designer and producer Claire Bateman has worked on games for all ages and abilities. She was a designer on www.wetellstories.co.uk, a collaboration between Penguin UK and games company Six to Start. This used a range of Web 2.0 technologies
to tell six classic stories including Dickens’ *Hard Times* and John Buchan’s *The 39 Steps,* thereby encouraging users to read in a different way. She was also a designer and producer on www.smokescreengame.com, a game for Channel 4 to teach teenagers about online security and identity issues that has just scooped the top award at the South by Southwest gaming conference in the US. This challenges users to undertake a series of self-contained missions within an overarching narrative so that gamers don’t feel they are learning.

Claire can see how gaming could engage adults who are not confident about their reading skills: “Games design can be used to give people space to tackle challenges they may want to avoid in real life for fear of failing,” she says. “For this reason gameplay can be used in quite sophisticated ways to encourage self-learning.”

To her the crucial elements of a game are choice, the need to resolve an obstacle, reward and feedback, all within a constraint, such as a time limit or a limited number of ‘lives’. “Once people are engaged they are likely to initiate their own research which may involve quite extensive reading. The allure of alternative reality games is the possibility that you can contribute if you want to but equally you can just enjoy being part of something live and changing all the time. Collaboration is normally the best way to encourage supportive communities rather than competition.”

**Naomi Alderman, author and games writer**

“Games could be incredibly accessible to reluctant readers,” says Naomi who has created games such as *Perplex City*, interactive fiction (www.thewinterhouse.co.uk) and novels for print. “They have the ability to teach in so many different ways – visual, aural, experiential, even via touch in the case of sophisticated consoles. Games give people an opportunity to win, to be a hero, to be amazing. People who aren’t necessarily confident readers can get excited and you could add reading along the way.”

“Anything can be adapted into a game,” she says. “To encourage full exploration: a collecting game, with badges for collecting all the items in a set. To encourage achievement and progress: a game in which you beat targets and personal bests and get little award badges for doing so. To encourage self-directed exploration: a game with many things to discover with no pre-defined sets. To encourage social interaction: a game in which you get more points or do better if you team up with other players. You need to think about what behaviour you want, then you can work out how to incentivise it via gameplay.” She feels that games are always better if targeted at a small demographic because the story will need to be different for different audience, for example 18-year-olds might need a thriller, parents something more family orientated.

**Cathrin Howells, education consultant and research associate, Heriot-Watt University**

For learners who have found playing computer games to be a useful stimulus to their literacy, a logical next step might be to write their own. At Heriot-Watt University in Edinburgh, the Adventure Author team is developing a game authoring tool for children that it thinks can fire their creativity and improve their storytelling and design skills while having fun along the way. It’s likely that the same principles could apply for adult learners too.

The Adventure Author tool is based on the commercial *Neverwinter Nights* game, specially modified to enable learners to design their own stories, scenarios and dialogues with the help of a stock of graphics and artwork (see also case study in Chapter 4 of this
The Heriot-Watt team offers teachers full training in the construction of the game and its use in the classroom, and education consultant and research associate Cathrin Howells says participants so far have been enthused and enthusiastic.

She thinks game design tests and improves learners’ problem-solving skills, enhances their spatial and visual literacies, and can be applied across the curriculum. “There’s a huge amount of cross-curricular potential. Literacy, design, business, domestic science—it can feed into all sorts of subjects.” The fun aspect of gaming is a useful counterpoint to more formal education, she adds, giving learners important freedoms and ownership of their work. “We encourage teachers to let children explore and play and then gradually introduce more focused learning. It’s a great mix of creative play and structured education.”

Writing dialogue for the game can advance reading and writing skills, whatever the learner’s previous ability. “We find that children become completely committed to the dialogue – and that ranges from excluded kids to the high fliers,” says Cathrin. She adds that teachers have reported a rise in interest in reading as a direct result of involvement in the game — especially in related genres like fantasy and science fiction. Learners are also encouraged to write about the game and their experiences with it. A range of spin-off applications – like a log to record progress through the design process and a function for discussing the stories with friends - are available to help.

Anna Wexler, Education Advisor, Commission for Architecture and the Built Environment (CABE)

Education advisor and former English teacher Anna Wexler also has a personal interest in the mechanics of how games work. From her experience of teaching young adults she has seen that “it doesn’t really matter WHAT reluctant readers read so long as it stretches and improves their skills.” She believes technology has increased the amount of writing young people do, which is backed up by recent research from the National Literacy Trust.35

Anna feels that the very nature of game design – competition, adventure and achievement to aim for - will motivate users. Using gaming to reach emergent readers could be a good way of engaging people who have previously been sidelined or haven’t enjoyed education. Nevertheless, she says that “to engage less skilled and enthusiastic adult readers the literacy element would have to be disguised behind the game element, but this seems entirely doable in terms of game design.”

Mark Stimpfig and Andrew Goff, ConnectED

ConnectED, distributor for Sony technology platforms in education and training across the UK, have been working on linking printed media with digital media through Second Sight. Students read a normal text or reference book on their Sony PlayStation and then show the PSP to a printed marker on the page that then plays back to the student audio, video, images or interactive 3D content. Using media pre stored on a PSP, for example, they have placed little codes into the text of Shakespeare to engage and highlight

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extended points of interest. 36 “The worlds of printed text and games media can complement and enhance each other,” explains Mark Stimpfig, Managing Director of ConneCtED. “Written media like plays, poetry, picture books, school books can be enhanced with selected media add-ons.”

In Education Director Andrew Goff’s view, “Gaming platforms and technology are one of a blended learning solution to achieving engagement. We mustn’t use gaming as the be all and end all, but rather one tool in the toolbox. In the way in which some teachers have made computers boring for students we don’t want to do this with gaming as it potentially has the most impact on achieving increased learning outcomes of any recent technologies.”

He feels that a great deal of investment is made into making all games for all specific PEGI age groups accessible and that games have the potential to lead users on to further reading. “As games are played, so familiarity and ease of use is developed, but with change of text at different levels all gamers are continually engaged and challenged to read as much as possible.”

Publishing perspectives
The publishing industry is increasingly recognising the digital era in all aspects of its work from marketing techniques to content and formats.

“We are paying far more attention to different formats and ways of consuming content,” explains Ben Wright, Digital Sales Director at Random House. “It’s partly driven by ebooks, partly by changing technologies and being aware of other ways of reading. We’re alive to the possibilities. A printed book is unlikely to be the only format anymore.”

But this raises a whole range of challenges – everything from the contract with the author to the production process to distribution. “We want to reach new customers via new outlets but also keep the traditional ones. Part of this is how we reach new customers such as reluctant readers who might use social networking, mobile phones or the Nintendo DS. There are definitely people who are not natural book customers but who are looking at words on the screen in front of them.”

Random House has supplied content to games developers such as material from Carol Vorderman’s brain training books. Software developers are also interested in the potential for fictional heroes to take the central role in a game – an all-action hero created by thriller writer Lee Child or a character in Sophie Kinsella’s Shopaholic novels.

There are definitely ways in which the reading experience can be enriched through digital technology, but the extras on offer have got to fit the audience. “Some readers won’t want an interview with the author – they just want the book. Others such as reluctant readers might want something more. We must get the balance between enhancement and distraction.”

Ben feels that the advent of Web 2.0 technology has brought the potential to move readers much closer to the creative process – “something that is not always comfortable for publishers who are used to being the gatekeepers.” Readers may be creating their

own fan fiction or voicing opinions on what they’ve read which may have more resonance with their peers than reviews by well-known names on a dust jacket.

**Reading as a ‘game’**

With the slow growth of the ebooks industry, some games developers have also started packaging reading as a ‘game’. Well-known books that have gone on to become international multi-media products have made their way into video games, from the early 1984 release of *Hitchhiker’s Guide to the Galaxy* text-based game through to the 2010 release film clip based *Scene It? Twilight Game*. Digital books are now more widely available in a variety of formats, for example the 2010 Quick Reads books are also downloadable digitally through the iTunes store.

In 2008 Nintendo released the *100 Classic Book Collection* game, which features 100 books stored on the DS cartridge. The player has to hold the DS like a book and can adjust text size. Just like a book, a player can bookmark a page, though additional features include search functions, introductions to books and author information. The authors range from William Shakespeare through to Jane Austen. Recent television adverts for the Nintendo DSi XL, which has a 93 per cent larger screen than the DS Lite, focus on how it makes ‘reading more comfortable’ - an example of the gaming industry actively promoting easier reading.

**Image 12: 100 Classic Book Collection (2009 - shown on DSi XL)**

In 2009 the games publishers Electronic Arts joined forces with book publishers to release the *Flips* series aimed at young readers on the Nintendo DS. Each game consists of six to eight books, with additional multi-media extras in terms of quizzes, character background information or, in the *Artemis Fowl* series, two extra stories. Eoin Colfer, the author of the bestselling series hopes this approach will encourage more children to read:

> “Everyone knows that reading improves literacy skills. I have two children who are DS fanatics and cannot wait for the FLIPS to arrive, so EA [Electronic Arts] might finally get them reading my books!”

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Publishers are keen to explore using other platforms to bring work to readers:

“Our job as publishers is to bring author’s work to as many readers as possible and we are increasingly looking at platforms other than the book to do this. So it’s incredibly exciting...to bring some of the best writing for children to one of the best selling devices in the world.”

Jeremy Ettinghausen, Penguin Digital Publisher

Quick Reads
Clearly there is potential for this approach to be used with reluctant or emergent adult readers in order to engage them with reading material. Each year, since its launch on World Book Day in 2006, the Quick Reads initiative publishes a range of short compelling fiction and non-fiction titles by top authors for adults who struggle with their reading or have not picked up a book for years. Project Director Kathy Gale is certainly aware of publishers being much more open to the possibilities of different formats to reach new audiences. “There was no hesitation on the part of publishers to produce Quick Reads in ebook format this year and to make them available via iTunes. We also offered a free ebook version of an earlier Quick Read, Ruth Rendell’s The Thief for a week from World Book Day and offered downloads from the Quick Reads website.”

Six Book Challenge
We were also interested to explore the potential for adapting the Reading Agency’s successful Six Book Challenge incentive scheme into a gameplay format. Participants are already encouraged to share their reading journeys on the Six Book Challenge blog at www.sixbookchallenge.org.uk and organisers feed in their news. But could the Challenge have more of an online dimension? Could it become a Six Game Challenge but still encourage people to develop an appetite for reading?

Games developers we talked to felt that the Challenge already has some of the crucial requirements of a game in place – an interesting challenge, rewards and feedback. The combination of these elements together with social networking between participants could be very powerful. But it will be important for the challenges set to be appropriate for an adult audience to avoid being in any way patronising.

The Reading Agency is keen to hear from games developers interested in discussing the potential for adapting the Six Book Challenge or other gameplay approaches likely to appeal to adults who are not confident with the written word. We also welcome ideas for different approaches to creating games from social networking to the use of interactive ebooks.

Conclusion


39 As above.
Games developers have a very immediate interface with their audience and have found a way of selling digital content to committed gamers of all ages worldwide. Publishers have to embrace the digital world if they are to maximise their authors’ work and to reach new audiences. The common ground between developers and publishers in promoting an enjoyment of reading text in all its forms is ripe for further collaboration in order to reach new audiences.
Chapter 6: Recommendations and next steps

The Reading Agency has undertaken this feasibility study in order to explore the potential for getting adults into reading through an activity that they wouldn’t normally associate with skills development. It provides a flavour of current activity around gaming and of attitudes towards gaming held by learning providers, games developers, publishers and learners themselves. It clarifies the links between gaming and learning and reinforces our certainty that creative gameplay can engage less confident adult readers at a level that suits them and helps to move them on.

Recommendations

This work has led us to several recommendations for different audiences:

For games developers

- Consider ways in which you could maximise the links between gaming, audience engagement and enjoyment to motivate and support adults who struggle with reading.
- Be aware of the amount, size and presentation of text you are using to ensure that it will not be too daunting for less confident users.
- Find ways to support text to make it as accessible as possible – through audio, online glossaries, visuals, etc.

For learning organisations

- Be aware of the potential of all types of games to engage your learners and motivate them to try out new skills and to keep practising them.
- Take note of the readability accessibility of games - in our sample the majority came in at Entry Level 3 to Level 1.
- Look further than simple educational games to more complex games which your learners may be attracted by to see how they can be used.
- Maximise the links between engagement, enjoyment and motivation and skills development.
- Ensure better access to multi-media platforms for practitioners and learners.
- Exploit the continuing increase of games in adults’ lives by identifying learning opportunities for gameplay away from formally taught sessions.
- Maximise the topic of gaming to lead as a hook into reading activities through websites, magazine and books.

For researchers

- Continue to investigate the impact of all types of gaming on people’s engagement, motivation and progression, in particular those with literacy needs.
- Include the role of gaming and other digital technologies as part of any new study into everyday literacy practices.
- Explore ways in which practitioners can become more knowledgeable and confident about using a mix of digital technologies with their learners and users.
For publishers

- Consider how you can use and adapt your printed content to a range of formats, including games, in order to appeal to less confident adult readers who might feel more comfortable with a games console or Nintendo DS than a book.
- Enhance the valuable Quick Reads initiative through greater access to the texts in digital formats.
- Work with games developers to reach new audiences in creative ways.

For policymakers

- Include the potential of creative gameplay and other digital technologies to engage otherwise alienated learners in policy development for formal and informal adult learning.
- Take note of the ever-growing access to video games for adults who would otherwise be disengaged from reading.

Next steps

Encouraged by the findings of this report, The Reading Agency will take this work forward by:

- Setting up a working group in order to integrate the use of gaming and other digital technologies into our Six Book Challenge scheme and our other work with adults with literacy needs. We invite games developers, publishers and learning specialists and providers to get in touch if they would like to be involved.
- Relaunching our First Choice Books database at www.firstchoicebooks.org.uk to include all kinds of printed and digital material, including games, for readers from Entry Level to Level 1.
- Continuing to work closely with publishers to ensure the provision of appealing texts in a range of formats for adults at the start of their reading journey, linking this to our new work on reading for pleasure for Entry Level learners funded by the Esmée Fairbairn Foundation.
- Continuing to work closely with the public library sector to encourage partnership with learning providers and access to a full range of reading materials, including games, for less confident adult readers.
Appendix 1: Learning provider survey

1.

The Reading Agency is an independent charity with a mission to inspire more people to read more. We have been working with the learning and skills and library sectors to promote the use of reading for pleasure in formal and informal adult learning as away of engaging, sustaining and motivating less confident adult readers. We link closely with NIACE on the Quick Reads campaign, creating learning resources and pradical schemes such as the Six Book Challenge and the Chatabout emergent reader group network to support use of the Quick Reads titles.

We are currently working on a feasibility study on the use of multi-media and digital technologies such as gaming to engage adults with literacy needs in reading for pleasure.

As part of this we are keen to understand the views and experiences of practitioners and invite you to complete this short survey. Those returning completed surveys by the end of **TUESDAY 9 MARCH** will be entered into a prize draw for a copy of *Screens and Pages: Technology and Reading for Pleasure* by Sal McKeown, Mary Moss and Tracy Slawson (NIACE June 2009).

1. Please give us your contact details:
   - Your name
   - Job title
   - Organisation
   - Your email address
   - Your daytime telephone number

2. What do you teach?
   - [] Literacy to adults
   - [] ESOL
   - [] Family learning
   - [] ICT
   - Other (please specify):
     [Box for additional information]

3. Do you use any kinds of digital technology in your work with adult learners?
   - [ ] Yes regularly
   - [ ] Yes occasionally
   - [ ] Yes I’ve tried a few times
   - [ ] Not at all

   Any comments
   [Box for additional information]
4. What do you think are the main barriers to using digital technologies with adult learners? Please number in order of priority with 1 = high and 5 = low.

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<th>2</th>
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<th>5</th>
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<tr>
<td>Limited access to ICT</td>
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<td>Lack of confidence in using ICT</td>
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<td>Perceived lack of time in formal settings</td>
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<td>Lack of ideas for using ICT</td>
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<td>Uncertainty about what would be appropriate for this audience</td>
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Any comments: ____________________________

5. What kind of digital technologies do you use with adult learners? Please tick as many as you like.

- [ ] Email
- [ ] Websites
- [ ] Blogging
- [ ] Social networks (eg Facebook, Twitter)
- [ ] Online games
- [ ] Games (eg fir PS3, Wii, Xbox)
- [ ] Virtual worlds
- [ ] Nintendo DS or other handheld devices
- [ ] Mobile phones
- [ ] Texting/instant messaging
- [ ] Ebooks
- [ ] Video production
- [ ] Digital photography
- [ ] Podcasting

Other (please specify): ____________________________
6. What kind of games do you use with adult learners? Please tick as many as you like.

- Educational games to support specific skills, eg spelling
- Commercial games
- Commercial games adapted for adult learners
- Game authoring technology

Other (please specify) including names and urls of games used if possible

7. What are the main benefits of using digital technologies with learners?
Please number in order of priority with 1 = high and 8 = low.

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<td>Engages the learner</td>
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<td>Supports their reading skills</td>
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<td>Supports their writing skills</td>
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<td>Introduces them to text in an accessible way</td>
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<td>Allows them to explore a topic of interest</td>
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<td>Encourages them to read more online</td>
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<td>Encourages them to read more printer material</td>
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<td>Relates to their everyday world</td>
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Other (please specify)

8. What do you think are the three main benefits of using gaming in particular?

9. What top three factors need to be taken into account to enable adults with literacy needs to use digital technologies such as gaming?
10. Do you feel there's a need for more digital content specifically made for and targeted at adult literacy learners?

☑ Yes  ☐ No

Please comment

11. Provide a brief summary of any experience you have had in using digital technologies and/or gaming with learners. Please specify if this involved adults with literacy needs or other learning difficulties.

12. Would you be prepared to provide a fuller case study if we contact you?

☑ Yes  ☐ No

Other (please specify)

13. Please add any further comments about how you feel use of digital technologies and gaming can encourage reading for pleasure.

Thank you for your time in completing this survey.
Appendix 2: Games developer survey

1.

The Reading Agency is an independent charity with a mission to inspire more people to read more. We know from research that reading for pleasure motivates and inspires adults with literacy needs as well as improving their skills. But can computer or online games and other digital technologies achieve the same effect?

The Reading Agency is working on a feasibility study on the use of multi-media and digital technologies such as gaming to engage less confident adult readers in reading for pleasure.

Knowing your interest in gaming and other digital technologies, we'd be delighted if you would take a few minutes to complete this short survey.

Those returning completed surveys by the end of Tuesday 9 March will be entered into a prize draw for a copy of Screens and Pages: Technology and Reading for Pleasure by Sal McKeown, Mary Mess and Tracy Slawson (NIACE June 2009).

1. How do you feel digital technologies and/or gaming can be used to engage reluctant readers? Do you know of examples?

2. How accessible are commercial games for people of any age who might struggle with reading? Do you feel that producers have considered this aspect when writing text for games?

3. The Reading Agency uses a reading challenge model successfully to engage adults with low literacy – see www.sixbookchallenge.org.uk This invites them to read six pieces of text (can be an article or short story rather than a book) to gain incentives and a certificate. How well do you think this could be adapted into a game?
4. Do you work with a particular audience?
   - Adults
   - Young People
   - Children
   - People of any age with low literacy
   - Other (please specify):

5. Have you designed and/or built an app or game which you think could engage adults who struggle with reading?
   - Yes
   - No
   If yes, please tell us more:

6. Please add any comments about how digital technologies and/or gaming could be used to enhance the experience of reading for pleasure.

7. Can we contact you for further information about this area of work?
   - Yes
   - No

8. Please give us your contact details:
   - Your name
   - 10th title
   - Organisation
   - Your email address
   - Your daytime telephone number:

Thank you for your time in completing this survey.