

the reading agency

Game On: Ways of using digital games to engage learners in reading for pleasure

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Please contact genevieve.clarke@readingagency.org.uk for further information.

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The Reading Agency
Free Word Centre
60 Farringdon Road
London
EC1R 3GA

tel: 0871 750 1207
email: info@readingagency.org.uk
web: readingagency.org.uk

Summary and key recommendations

This document reports on the project undertaken by The Reading Agency for the Department of Business, Innovation and Skills (BIS) and NIACE between April and June 2011 which aimed to:

- help develop the Department's thinking and plans to capitalise on the power of digital games;
- lay better groundwork to help the learning and skills sector harness the potential of games to engage and support people who are struggling with reading and writing and transform their perception of literacy and its relevance to their lives; and
- take The Reading Agency's adult literacy development work with digital games to the next stage.

The work will contribute to the BIS review of Skills for Life in parallel with a wider study of technology in preparation by NIACE which will look at the current and potential use of technology in delivery of Literacy and Numeracy.

The report builds on The Reading Agency's previous work in this area recorded in *Gaming for Reading: A feasibility study on the use of video games to engage adults with low literacy in reading for pleasure*¹ published in June 2010. This recommended further activity to establish the use of digital games as a way of engaging adult literacy learners and motivating them to practise their skills (see Chapter 1 of this report). For this subsequent study we have:

- reviewed more recent research on the role of games within the adult learning and skills sector (Chapter 2)
- undertaken a further review of a range of games to consider their accessibility and applicability for adult literacy learning (Chapter 3)
- commissioned a research and development process from games developer PlayGen to create two gaming approaches for the Reading Agency's Six Book Challenge² (a text-based game playable on a basic mobile phone and an online social game) and test them with learners (Chapter 4). A full report from PlayGen, our briefing documents and detailed responses to user testing are available on request.
- discussed the findings from this process at a think tank attended by policymakers, researchers and practitioners (Chapter 5)

This has been a short but very useful project. It has reinforced the relevance of learners' own digital lives for policy and practice in the learning and skills sector. It has explored two gaming approaches linked to the Six Book Challenge, both with potential for further development but distinctively different in their choice of technology platform. And it has highlighted the range of existing games that can be used to engage reluctant and under-confident readers in text. But most of all it has provided new thinking on innovative ways in which people with literacy needs can be motivated and supported both within and beyond the classroom.

Our key recommendations based on this work are as follows (see also Chapter 6):

¹ <http://www.readingagency.org.uk/adults/reading-for-gaming/>

² www.sixbookchallenge.org.uk

Policymakers

- Endorse use of the whole range of digital technologies including gaming by learning organisations as a way of engaging potential and existing learners in text and motivating them to practise and improve their skills
- Ensure that learning opportunities and provision are as relevant and appropriate as possible for learners' everyday lives and needs, including their own use of digital technologies such as mobile phones, the internet, games and social media

Researchers

- Explore the impact of digital technologies, and specifically gaming, on adults' acquisition of literacy skills rather than relying on research focused on children and young people

Practitioners

- Integrate digital technologies such as gaming into pedagogical development rather than relegating them to a supporting role

Games developers

- Work with The Reading Agency to explore how game play can be used to encourage engagement with text and help people to reinforce their learning and improve their literacy and communication skills

Publishers

- Build partnerships between games developers and learning and skills specialists to consider how texts might help to achieve learning outcomes through presentation in a different format

The Reading Agency will now prioritise these actions:

- hold an annual think tank event on the evolving links between digital technologies such as gaming and engagement in reading of all kinds
- launch a gaming dimension to the Six Book Challenge in which people can take part by playing games that involve some engagement with text
- add a minimum of 20 further games to our database for new readers at www.readingagency.org.uk/findaread in preparation for the Six Book Challenge 2012
- decide how to take forward either or both of the gaming approaches developed for this project in order to benefit our target audience of adults with low literacy skills
- create a digital community around the Six Book Challenge through use of social media in order to drive participants to online activity, thus supporting parallel initiatives such as Race Online 2012 and the BBC's First Click campaign

Chapter 1: Background

"Games are very powerful learning tools because people forget they are learning. You can't get a bigger gain than engagement. We need to get the message out that it's OK to use games." Markos Tiris, Learning and Skills Improvement Service

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.

Our main programme for this audience is a simple but powerful incentive scheme called the Six Book Challenge (www.sixbookchallenge.org.uk). Launched in 2008, this invites people to read six books and record their reading in a diary in order to receive a certificate. 13,500 registered for the Challenge in 2010 through libraries, adult education, colleges, prisons and workplaces – up 50% on 2009. We are aiming for 18,000 participants in 2011 and 22,500 in 2012, by which time we hope to have engaged 10% of participants in a digital aspect of the scheme.

Research tells us that creative reading activity of this kind, supported by libraries, builds learners' confidence and motivates them to read and learn more at the same time as improving their reading, writing, speaking and listening skills. An impact evaluation for the Six Book Challenge carried out in 2008 showed that 94% of participants felt a sense of achievement, 88% said they gained from the scheme and 60% reported an increase in skills – a finding endorsed by tutors.

Challenge participants can read whatever they like in order to complete the scheme, ranging from books such as the Quick Reads specially written for people just getting into reading to graphic novels, poems, magazine articles and even games. The key aim is to engage people in text in order to open up a world of enjoyment and enrichment which in turn will spur them on to more reading and more learning.

Our previous research

In 2010 we began looking at the links between games, reading for pleasure and adult literacy to see how the use of games could provide another way for less confident readers to engage with text. Could the appeal of game play be used to engage people who wouldn't pick up a book? And could these digital technologies be a stepping stone towards improved literacy skills?

The resulting report, *Gaming for Reading: A feasibility study on the use of video games to engage adults with low literacy in reading for pleasure*, found that:

- i) 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.
- ii) 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.

iii) 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.

We included recommendations for a range of sectors and set out next steps for our own work, which we have taken forward in the following ways:

- 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 have done this by:
 - encouraging further use of blogging by Challenge participants at www.sixbookchallenge.org.uk (see examples from Doncaster College).
 - developing gaming options for the Six Book Challenge through this current project.
- relaunch our First Choice Books database to include all kinds of printed and digital material, including games, for readers from Pre-Entry Level to Level 1. We have done this by:
 - launching a unique new database at www.readingagency.org.uk/findaread which contains over 900 items suitable for readers from pre-Entry to Level 2. This is searchable by reading level, format and subject category as well as author and title and includes websites, magazines and games suitable for people at the lowest level of literacy in addition to books. It also invites users to review and recommend items.
"It's really handy and fantastic to have the ability to search by level."
Moira Johnson, Learning Resources Manager, Treloar College
- continue 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. We have done this by:
 - liaising with a range of publishers, mainly through our online Chatabout network for practitioners running or wanting to start emergent reader group.
 - compiling a list of over 40 publishers who have produced materials suitable for readers with low literacy available at www.delicious.com/chatabout
 - holding a network day for adult literacy practitioners and library staff to meet a range of publishers.
 - carrying out action research to introduce reading for pleasure to learners at the lowest level of literacy through our Words for Life project funded by the Esmée Fairbairn Foundation.
- continue 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. We have done this by:
 - providing guidance to the sector around partnership working and provision of appealing materials, particularly in relation to delivery of the Six Book Challenge scheme.

Roundtable discussion

We followed publication of this report with a roundtable discussion on the topic, highlights from which are featured at www.youtube.com/readingagency. This was chaired by Tom Chatfield, journalist, games enthusiast and author of *Fun Inc.: Why games are the 21st century's most serious business*. Speakers were as follows:

- Jill Attewell, then MoLeNET Programme Manager, Learning and Skills Network (LSN)
- Adrian Hon, founder and Chief Creative Officer at Six to Start
- Rhianna Pratchett, games script writer and story designer
- Markos Tiris, Head of Teaching and Learning, Learning and Skills Improvement Service (LSIS)
- Michelle Treagust, Project Manager, Adult Learners, The Reading Agency
- Ben Wright, Digital Sales Director, Random House UK

Discussion ranged across the role of text in games, their huge capacity to engage players and how this might be deployed to help learners with low literacy. Adrian Hon, whose company Six to Start has made award-winning games such as *Smokescreen* for Channel 4, said "There's always a place for text in games and it's still one of the best forms of 'world building'. The Reading Agency's report has made me think about accessibility and keeping it simple to attract as wide an audience as possible."

Next steps

We also talked about the commonalities between our Six Book Challenge scheme and successful commercial and educational video games. These include the key elements of challenge, competition, progression, achievement, engaging subject matter and social interaction, all of which are required to engage and help participants to progress.

This, together with a combination of the factors below, convinced us at The Reading Agency that we should be trying to develop a 'game' version of the Six Book Challenge:

- the number and range of games available that require engagement in text in order to play. Literacy skills may therefore be improved unknowingly as a by-product of playing games. And games could be designed in such a way that skills development is a regular outcome.
- the power of games to engage young people and adults who would not pick up a book to read. Games provide stimulation and progression in an accessible format with which emergent readers may be more familiar and in an environment that they might find more welcoming.
- use of games by people with relatively low literacy and a keenness to be part of a digital community of interest. Lack of confidence with reading does not necessarily stand in the way of them having access to computers, playing games or using social media.

We thus proposed that The Reading Agency should develop options for a Six Book Challenge game to engage, support and help literacy learners and, in doing so, contribute to wider thinking about the role of game play to support pedagogy for adult literacy. BIS agreed to fund this work as part of a larger project to be carried out by NIACE looking at the use of technology to support learning and skills. Together the two projects would inform the current BIS review of the Skills for Life strategy.

The Reading Agency also undertook to map relevant research since publication of its earlier report in June 2010 and look at further games in order to find a match between game play and use of text – see the following two chapters.

Chapter 2: Recent research

Since The Reading Agency published *Gaming for Reading* in June 2010 the gaming sector has continued to grow exponentially and there has been further interest from the education and library sectors in how games can be used to support adult learning.

Gaming sector

Despite 2010 being a tough year for the economy, the video games industry in the UK performed well with annual sales figures of £1.53 bn, with consumers buying a total of 63 million games, which works out at more than one per person in the UK³.

Gamer demographics are evolving as demonstrated by The Entertainment Software Association's (U.S. based) report in 2010 which stated that 72% of American households play computer or video games, the average player is 37 years old and in 2010 over 29% of gamers were over the age of 50⁴. These statistics dispel the myth that gamers are only teenagers; games are very much becoming part of adult life.

The casual gaming market is still growing, as is the share of mobile and online games with these having a predicted 50% market share by 2014⁵. As mobile phone users discard older handsets and purchase smart phones, access to games and social media applications is increasingly commonplace.

The top selling video game in 2010 with over 18.88 million sales worldwide was *Call of Duty: Black Ops*, a first person shooter game. The break out titles of 2010 were the dance games (*Just Dance*, *Just Dance 2*, *Dance Central*), largely due to the release of two new motion sensor devices for the Xbox (Kinect) and PlayStation (Move). Also, mass marketed content performed well (*Toy Story*, *Lego Harry Potter*, *Lego Batman*)⁶.

Education sector

Research in the education sector on the use of games continues to focus on primary and secondary schools. However, the pedagogical applications of gaming and education are transferable to other age groups.

Futurelab, an independent not-for-profit organisation that develops creative and innovative approaches to education, teaching and learning, has a history of researching the use of games within education. Their report *Games-based experiences for learning*⁷,

³ ukie (2011). *UKIE releases 2010 year end figures - another strong year for the video games and interactive entertainment industry* [Online]. Available from: <http://www.ukie.info/content/ukie-releases-2010-year-end-figures-another-strong-year-video-games-and-interactive-entertai> [Accessed: 22 June 2011]

⁴ entertainment software association. (2011). *2011 Sales, Demographic and Usage Data*. [Online]. Available from: http://www.theesa.com/facts/pdfs/ESA_EF_2011.pdf [Accessed: 18 June 2011]

⁵ Merel, T. (2010). *Global Video Games Investment Review*. [Online]. Available from: http://cmpmedia.vo.llnwd.net/o1/vault/gdceurope2010/slides/T_Merel_Business%20&%20Management_Global%20Video%20Games%20Investment.pdf [Accessed: 19 June 2011]

⁶ VGChartz (2011). *Top Selling Games of 2010 (Multi, Wii, PS3, PSP, DS, X360)*. [Online]. Available from: <http://www.vgchartz.com/article/83386/top-selling-games-of-2010-multi-wii-ps3-psp-ds-x360/> [Accessed: 19 June 2011]

⁷ Bober, M. (2010). *Games-Based Experiences for Learning*. [Online]. August 2010. Available from: http://futurelab.org.uk/sites/default/files/Games_based_experiences_for_learning_0.pdf [Accessed: 19 June 2011]

published in 2010, gives an overview of what makes a digital game motivating, provides a taxonomy of their learning elements and suggests a set of design principles for games-based learning experiences. Through their literature review and expert interviews, they identify the following key learning elements of digital games:

- Challenge: A test of learner's skills, set at a level to stretch his/her abilities.
- Fantasy/Narrative: Imaginary environment, characters or story which can stand as a metaphor for the real world.
- Feedback: Response to the learner's actions or progress within the game.
- Goals: Clear aims that are meaningful and achievable but stretch the learner's abilities.
- Sensori/Stimuli: Engaging visual and sound effects.
- Social aspects/Community: Playing with or against other people and social interaction inside and outside the game.

There are also additional learning elements, depending on the type of game, ranging from creativity (using imagination to solve problems or producing artifacts) through to reward.

In comparison to other experiences with learning (for example with reading), it's of interest that learners expect to fail when playing games. This is inherently part of the gaming experience; if a game is too easy it's deemed to be boring. Learners want to be challenged, as Kimmo Oksanen, researcher at the Finnish Institute for Educational Research at the University of Jyväskylä, explains in his expert interview for the report:

"Students found it engaging mostly because of the game tasks which were difficult enough, not too easy but not too difficult. [...] For flow it's important that the difficulty of the game is just about right for a player, not too easy but not too difficult because if it is too hard, it's frustrating."

Throughout other expert interviews a common theme is the high engagement factor of games, of particular interest for work with adults who have not previously engaged in traditional learning. For example, Donna Burton-Wilcock, CEO of Immersive Education, developers of a game-authoring tool for schools called MissionMaker, describes how games can engage disaffected young people:

"I worked a lot with disaffected young people who I would say were as intelligent as some of the kids who were seen as traditionally academic, but because they hadn't had a background of valuing books or learning to read early, they needed different ways of communicating, and different ways of communicating understanding, and I think something as motivating as a game and as different and [that] doesn't have all the hang-ups and baggage that a lot of school subjects have for those sorts of children. I think the visual angle immediately engages their interest."⁸

As Donna Burton-Wilcock explains, the visuals in games can help users with lower literacy engage with games and digital texts. Dawn Hallybone, a teacher and ICT Coordinator at an East London primary school, gives an example of using the DS game *Professor Layton and the Curious Village* to inspire children's creative writing skills:

"It's the graphics and it tells a story, and for those children whose literacy skills may not be the best, they've got a source straight away. For those that struggle

coming up with ideas and imagination, they have that rich subtext all ready for them, and they can see the picture and describe what does he look like, what do you think he's feeling, and they've got that as a basis. And for the Gifted and Talented writers, just the richness of the text and the images and the story got them. [...] The writing that came out of it was amazing."

Collaboration through gaming is also seen to be key, with learners becoming more autonomous through supporting each other and relying less on the teacher. This could be of great benefit to adult learners who may be restricted to just a couple of hours of direct teaching time per week. Derek Robertson, National Adviser for Emerging Technologies and Learning, Learning and Teaching Scotland, explains how children playing on the DS started collaborating:

"However, they'll easily support their colleagues, their peers, to help them move forward and learn from each other. And same with Nintendogs, [...] we're finding that children are becoming very collegiate, very supportive, encouraging [...]. They don't see these hierarchies, they're all equal in terms of their abilities, [...] there's very little sense of hubris, 'Oh, look at me, look how good I am.' They seem to be very accommodating and sharing..."

Another outcome from collaboration and social interaction is that learners discuss their experiences, leading to reflection and subsequent learning. Interviewees also agree that games-based learning should not be a stand-alone activity, but instead be mediated by a practitioner to facilitate the learning and be supported by other tools and teaching methods.

Library sector

The library sector across the world has started to recognise the opportunities that gaming presents to engage users of all ages. Gaming in all forms (from board to video games) is something that is being used to bring communities together as libraries shift from quiet spaces to those where conversations and social interaction are encouraged.

A leading advocate of gaming in libraries is Scott Nicholson, who in the US has (since 2008) been helping libraries run gaming programmes. He believes the right games bring people together, as demonstrated at Fayetteville Free Library (New York) which has a collection of board and video games and hosts its own game programme:

"The programme was launched as an intergenerational event in which we invited senior citizens from local living facilities as well as families... People of all ages would come in, from 5 to 95, and they would teach each other and play together. It was really exciting."

Monika Kuryla, director of Virtual and Innovation Services at FFL ⁹

Nicholson recognises the power of games being used as a teaching tool, for gamers and also game creators:

⁹ Hinkleman, A. (2011). For Syracuse University professor, libraries are for games. *Syracuse.com* [Online] 7 May. Available from: http://www.syracuse.com/news/index.ssf/2011/05/for_syracuse_university_profes.html [Accessed: 16 June 2011]

“Research is showing when someone makes a game it goes into your long-term memory more than many traditional forms of pedagogy.”

Scott Nicholson

The social aspect of gaming is mostly clearly demonstrated through last year’s National Gaming Day @ your library held at more than 1880 libraries across America. Users participated in the largest, simultaneous national video game tournament ever held. This initiative is promoted by the American Library Association as a way of connecting “communities around the educational, recreational, and social value of all types of games¹⁰”. They consider games to be a natural addition to library stock and recognise that games give users a chance to practise a range of skills – reading, writing and computing.

Though the library sector in the United Kingdom hasn’t quite ‘leveled up’ to American standards, people with similar interests are coming together through online social networks such as twitter and Google groups. Lib Gaming UK is an online group where members can discuss gaming and games in UK public libraries¹¹. Topics discussed include research in the field, new game releases and sharing best practice such as running gaming events in libraries.

In comparison, in Australia and New Zealand the use of digital games to engage audiences was one of the topics discussed in the 2010 fifth Auslib conference titled “12 to 24s @ Your Public Library in Australia and New Zealand”. The conference aimed to share best practice around engaging and providing a service for young people. Many of the papers referenced the use of games in libraries, with Ellen Forsyth’s paper “From *Assassins Creed 2* to *The Five Greatest Warriors*: Games and Reading”¹² focused on how reader advisors can use a gamer’s interest in specific titles to recommend reading material:

“Knowing what games people enjoy playing can help library staff suggest appropriate reading or plan programming of interest and relevance to their community of people who play games as well as read.”

Though the paper was for a conference about engaging young adults, Forsyth stresses that gaming is not age dependent and can be used very broadly.

She carried out a survey to ask people who read and play games why they enjoy reading certain titles and why they enjoy playing certain games. The research identified a link between the two formats, with readers / gamers enjoy reading / playing titles with the same appeal characteristics, as the following respondent demonstrates:

“Fantasy for me provides an excellent canvas for expressing one’s imagination and creativity, more so than other genres in my opinion. As a reader, each new series, each new book or short story is unique and bold, dripping with colour and life and although it can be said for all literature, it is especially true that each work of fantasy fiction is strongly unique in ways uncaptured in other genres.

¹⁰ ilovelibraries.org (2011). *Celebrate National Gaming Day 2011 @ your library!* [Online]. Available from: <http://ilovelibraries.org/gaming/> [Accessed: 17 June 2011]

¹¹ Lib Gaming UK (2011). *Lib Gaming UK*. [Online]. Available from: <http://groups.google.com/group/lib-gaming-uk/> [Accessed: 16 June 2011]

¹² Forsyth, E. (2010). *From Assassins Creed 2 To The Five Greatest Warriors: Games and Reading. In 12 to 24s @ Your Public Library in Australia and New Zealand*. Beenleigh Qld 11-12 June 2010. Adelaide: Auslib Press. pp.106-117.

I feel this aspect of fantasy is intensified with RPGs [role playing games], as they not only give a storyteller the tools to create their own worlds but they make it a much more intense experience for those who choose to join that world. Where in a series such as *Lord of the Rings*, we all held our breath as characters brought an epic storyline to life, in a game of the same nature, we play those same stylised heroic characters and the fate of the world and its inhabitants, no more or less real than in a traditional piece of literature, is in our hands.”

Forsyth linked these characteristics to the Nancy Pearl doorway descriptions. Nancy Pearl is an American librarian, well known for her knowledge of books and literature, who regularly commentates on recommending reads to others. The doorway, or appeal characteristics, are hooks which draw readers into work – what someone most enjoyed about a film, book, art work or game. The characteristics are split into four categories: character, language, setting and story, though many people will prefer a combination of doorways, with one or two being dominant.

Forsyth demonstrates how these doorways can be used to engage gamers in reading. By finding out what game characteristics they enjoy, library staff can recommend reads which have similar characteristics. For example, a gamer that plays *Assassins Creed 2* (a third person adventure and action game set in the 15th century in Venice) may have engaged through the doorway of story (there is a strong narrative element to the game), character (the character you play and others you meet along the way) or setting (historical and location). Through talking with the gamer and finding out what elements they enjoy about the game, a librarian can recommend a book with the same characteristics – ones with fast paced narrative stories, those in realistic settings or titles following on from the history or politics of the period.

Though it is not suggested that all librarians should suddenly become ardent gamers, Forsyth does recommend ‘reading and playing’. Through staff engaging with the medium themselves, they will have a better understanding of their audience and how to support them in recommending titles to read.

Conclusion

Though new research appears still to be limited to the use of games with children and young adults, the benefits identified are transferable to work with adults. There is clearly an opportunity for researchers within adult education and library sectors in the UK to learn from practices being explored elsewhere in the world and in primary / secondary education in the UK.

As demonstrated the gaming industry is continuing to grow, and access to games and gaming is becoming increasingly embedded in people’s lives. This highlights the need for any new research around everyday literacy practices to inform policy and practice by encompassing the way in which people with low literacy are making use of digital technologies despite not being regular readers of print. Without these insights it could be ‘game over’ for adult educators.

Chapter 3: A further review of games

The number of games in the market is huge and increasing at a daily rate. It's hard to judge how many games people can access when it's no longer only the domain of large game publishing companies – even 14-year-old boys can create their first game and top the free app charts as Robert Nay did in January 2011 with his game Bubble Ball¹³.

When researching existing games to find a match between game-play and use of text we decided to focus on three areas:

- those referenced in research into the use of games in education;
- those researched for the development of the gaming options for the Six Book Challenge;
- those already played by the target user group and mentioned during the user testing process.

To ensure that we covered a wide range of games and built on our previous research, we also reviewed those for additional platforms, different gaming genres and those that specifically promoted literacy and we looked at the best sellers of 2010.

This work builds on the games we listed in *Gaming for Reading* and subsequently added to the Find a Read website (www.readingagency.org.uk/findaread). Before titles are added to Find a Read they are reviewed to ensure they are appropriate for adults with literacy needs. Texts should be aimed at adults, not too long (i.e. number of pages, though this is not relevant in a game), have a legible typeface, short paragraphs, a strong hook and, above all, be designed for readers – not learners¹⁴. Text is also assessed for its readability using the SMOG test – a 'Simple Measure of Gobbledygook' which takes into account length of sentences and use of multi-syllable words. This methodology has also been applied to the games that have been selected for this research.

Games mentioned in recent research

In the conference paper "From *Assassins Creed 2* to *The Five Greatest Warriors*: Games and Reading" the author Ellen Forsyth lists many different examples of games, from those played by the gamers she surveyed through to her personal knowledge of games.

The game referred to in the paper's title *Assassins Creed 2* is from a historical science fiction third person action adventure game series. As the main character, Desmond Miles, the player has to relive the memories of Desmond's ancestors, who were all assassins, in order to recover artifacts. The game has a strong narrative, with fully formed characters and as a player you are very much drawn into the world. As you complete tasks you meet and have conversations with other characters and you have to follow instructions on screen, for which you read text.

¹³ BBC Radio 1 Newsbeat. (2011). *Teen's Bubble Ball game tops iTunes free app chart*. [Online]. Available from: <http://www.bbc.co.uk/newsbeat/12224670> [Accessed: 18 June 2011]

¹⁴ The Reading Agency. (2011). *Find a read – Recommend a read*. [Online]. Available from: <http://www.readingagency.org.uk/findaread/recommend-a-read.html> [Accessed: 18 June 2011]

Assassins Creed 2 (Ubisoft 2009)



Though there is some text on screen, the player could engage to some level without understanding every word as conversations are also spoken. However, it is the narrative of the game that is particularly compelling and could be used as a starting point to engage gamers in reading a wider range of texts. The game has a readability score of 13, Level 2.

As with much other research in this area, Forsyth states that social interaction is a major enjoyment factor for gamers. A genre of games where this is a key element is MMORPG – Massively Multiplayer Online Role-Playing Game, where a large number of players interact with each other in a virtual game world.

As in RPG (Role Playing Games) players assume the role of a character and take control of their actions. MMORPGs are played throughout the world, the most popular being *World of Warcraft (WoW)* that as of October 2010 had over 12 million subscriptions¹⁵. But users don't just collaborate within the games themselves, they also branch out and start collaborating in other areas – such as the WoW Wiki which is the second largest English-language wiki in the world behind Wikipedia¹⁶. With such a breadth of activity around MMORPG and the never-ending game narrative, it's difficult to judge the literacy level required to engage with these games. However, it could be assumed that with millions of players worldwide there must be some levels of accessibility to users with lower literacy levels or the games would not be so popular.

In Forsyth's paper *WoW* is listed as a game played by those surveyed, as is *Lord of the Rings* online, which is of particular interest in relation to literacy as the virtual world is based on written text - Tolkien's *Lord of the Rings* books. The player controls a character that can interact with others in the world and earn points through taking part in player versus player combat. There is also an overarching storyline presented in a series of "books" which themselves have smaller quests called "chapters". To progress through the game players have to follow on screen instructions and read dialogue with NPC (non

¹⁵ Blizzard Entertainment. (2010). *World of Warcraft Subscriber Base Reaches 12 Million Worldwide*. [Online]. Available from: <http://us.blizzard.com/en-us/company/press/pressreleases.html?101007> [Accessed: 18 June 2011]

¹⁶ Dybwad, B. (2008). *SWSX08: How gamers are adopting the wiki way*. [Online]. Available from: <http://massively.joystiq.com/2008/03/08/sxsw08-how-gamers-are-adopting-the-wiki-way/> [Accessed: 18 June 2011]

player characters). This game had an average readability score of 12, which is equivalent to Level 2. Futurelab have carried out many research studies into the use of games in education and frequently cite examples of practitioners using commercial games in the classroom. For example, the Nintendo DS is often mentioned, with students playing games with a clear educational purpose such as *Dr Kawashima's Brain Training* (literacy and numeracy tasks to improve memory) through to those with less obvious educational outcomes *Nintendogs* (looking after a virtual pet).

In *Computer games, schools and young people (A report for educators on using games for learning)* (2009)¹⁷ the 2007 game *Hotel Dusk: Room 215* is cited as a game used to develop players' literacy skills through engaging them in the game's genre and getting students to write similar stories. *Hotel Dusk* is a graphic crime noir style game where the player has to solve a variety of smaller puzzles to unravel the mystery of the hotel and the disappearance of the character's old police partner.

Hotel Dusk (Nintendo 2007)



Literacy skills are used throughout the game, the player has to read text on the screen to follow the narrative of the story and write in a notebook at critical game stages.

There are many murder / crime style games on the market and this genre would be popular with adults who enjoy similar stories on television or film. Learners we interviewed for user testing also talked about enjoy reading crime stories. With the text on screen being broken into small chunks, it is also accessible to those people with lower literacy skills. *Hotel Dusk: Room 215* has a readability score of 10, Entry Level 3.

Hotel Dusk is also cited as a game used to support literacy skills development in the Futurelab 2010 report *The impact of console games in the classroom: Evidence from schools in Scotland*¹⁸. The main purpose of the report was to identify the educational

¹⁷Williamson, B. (2009). *Computer games, schools, and young people – A report for educators on using games for learning*. [Online]. March 2009. Available from: http://archive.futurelab.org.uk/resources/documents/project_reports/becta/Games_and_Learning_educators_report.pdf [Accessed: 18 June 2011]

¹⁸ Groff, J., Howells, C. & Cranmer, S. (2010). *The impact of console games in the classroom: Evidence from schools in Scotland*. [Online]. Futurelab 2010. Available from: <http://www.childrenliteracylab.org/uploads/website/docs/1818-1-Console%20games%20report.pdf> [Accessed: 18 June 2011]

benefits of console games-based learning in primary and secondary schools. The outcome was positive with many benefits demonstrated, particularly in how gaming can engage students in activities that can enhance their learning. In the case studies console games used included *Cooking Mama* (readability 12, Level 1), *Wii Tennis* (game play readability of zero, Pre-Entry) and *My Word Coach*.

My Word Coach is a game playable on the Nintendo DS, Wii and iOS that clearly states its gaming intention - to help players improve their literacy skills. Through completing different training exercises that consists of mini games such as writing the missing letter to matching words with definitions, players can increase their 'Expression Potential' and improve their vocabulary.

My Word Coach (Ubisoft 2007)



From the start of the game there are some three syllable words which would be unfamiliar to adult literacy learners, however there is additional support through a trainer and also a glossary, based on the Cambridge Advanced Learner's Dictionary. Due to the complexity of vocabulary, the game has a readability of 12, Level 2.

Another case study in the report saw Meldrum Primary School inspiring learners through the Sony PlayStation 2 game *Guitar Hero*. This study demonstrates how a game can be used in a classroom to develop a wide range of activities, from writing adverts for guitars through to carrying out a science investigation into the use of sound. *Guitar Hero* is a game where players take on the persona of a rock star and have to play songs using a 'guitar'. It has since spawned many different musical based games, such as the popular *Rock Band* and *Lips* series.

In the original *Guitar Hero* game players had to follow pictorial symbols on screen and play along. Later editions of music games have seen players having to sing along to songs, following lyrics on screen. Here there is obviously a reading, speaking and listening element. The literacy level of the game can depend on the song chosen, ranging from *ABC*

by The Jackson Five on the Xbox game *Lips* which comes out at readability 8 (Entry Level 1-2) to *Killer Queen* by Queen on *Guitar Hero* which is readability 13 (Level 2).

It should be noted that existing research around gaming never specifically cites a game being used to develop only reading skills. Instead, games are used for engagement and a range of skills, with literacy (speaking, listening, reading, writing) being just one part of this. However we've selected the games listed below for their clear links to literacy skills.

Games with links to literacy

Games that have already been mentioned which are promoted to gamers as having clear links to literacy skills include *My Word Coach* and *Dr Kawashima's Brain Training*.

Reading itself is also being turned into a 'game', with texts either having interactive elements or users being able to choose how the story develops. The first recorded example of the latter in print form, called 'gamebooks', was published in 1941¹⁹. One could argue that these paperback stories were the first 'interactive games' and a precursor to classics such as the *Hitchhiker's Guide* infocom adventure. If you look closely at many of today's video games (such as *Heavy Rain*) the basic approach hasn't changed with the reader given the power to direct the course of the narrative.

One of the popular gamebook series first published in the late 1970s, *Choose Your Own Adventure*, has now been transformed into a digital version for the iOS (iPad, iPhone and iPod Touch) and rebranded as *U-Ventures*. After a couple of screens' worth of text, the reader is faced with two or three options, each of which can lead to one of 40 possible endings. Originally written for 10 to 14 year olds, their readability level (14, Level 2) rather than their content makes them suitable for adult literacy learners.

U-Ventures: Return to the Cave of Time (Simon & Schuster Children's Publishing 2010)

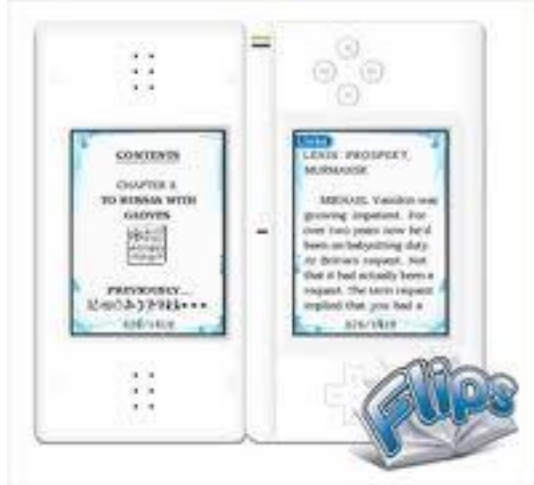


¹⁹ Katz, D. (2011). *Examen de la obra de Herbert Quain*. [Online]. Available from: http://www.gamebooks.org/show_item.php?id=7380 [Accessed: 18 June 2011]

One of the benefits of these books for literacy learners is that chapters are shorter and, if used on a mobile phone, there is less text on the 'digital' page. When carrying out user testing one of the learners commented that they had downloaded the Kindle app, but had found the free book, *Treasure Island*, too difficult to read. Instead they gave up on Kindle and came across a 'choose your own adventure style' book and enjoyed such an accessible, short read. As will be discussed later, this text style adventure approach to a game was one we developed as part of this project.

Another way of turning reading into a game is by adding interactive elements. For the Nintendo DS a series of children's book titles have been published as *Flips*, interactive books that challenge the reader / gamer to collect items, unlock bonuses, track progress and share with friends. Unfortunately current titles are very much aimed at children, but some adults may be attracted to some genres, such as the *Artemis Fowl* series if they enjoy science fiction or the *Percy Jackson* series if they enjoy fantasy. With these titles the readability very much depends on the book; for *Artemis Fowl* the average is 14, Level 2.

Flips: Artemis Fowl (Electronic Arts 2009)



For some readers, accessing well-known printed text titles through games can be a way for them to be introduced to a story's narrative and characters which, because of their literacy level, they may not be able to read. Many games are based on stories which originally began life in book form. The MMORPG *Lord of the Rings* has already been discussed, but other series (in particular those that have transferred to film) have numerous gaming spins-offs including *Harry Potter* and the *Twilight* series. One example is the multiplatform game *Harry Potter and the Order of the Phoenix* which follows the storyline of the fifth book in the series. The player has to explore Hogwarts and follow the story from the book and the movie. In the version for the DS the gamer has to read text to follow instructions and the narrative of the game (dialogue etc.). The game comes out at a readability of 11, Level 1, which is lower than the book (13, Level 2).

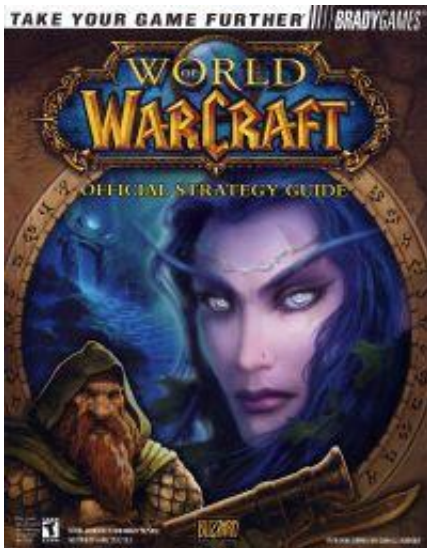
Games with familiar characters continue to perform well in the sales chart, with a new version of the Harry Potter series – *Lego Harry Potter: Years 1-4* selling 3.95 million copies worldwide in 2010 (no. 24 in the top 30 multiplatform games chart)²⁰.

²⁰ VGChartz (2011). *Top Selling Games of 2010 (Multi, Wii, PS3, PSP, DS, X360)*. [Online]. Available from: <http://www.vgchartz.com/article/83386/top-selling-games-of-2010-multi-wii-ps3-psp-ds-x360/> [Accessed: 19 June 2011]

Games are no-longer stand-alone entities. If a player wishes to learn more about game play, a particular character, virtual world, game tips or talk to other players there are numerous forums and wikis online (e.g. WoWWiki). The wealth of knowledge presented in text format for gamers is huge, alongside social networks for discussing games with other players. Monthly print magazines include *gamesTM* and *The Official Nintendo Magazine*, but with online magazines such as *GamerZines* available, it should be no surprise that print magazines are struggling. In July 2010 Britain's first ever magazine dedicated to PC gaming ceased publication²¹.

As with other printed texts in the classroom (such as newspapers), practitioners could use gaming magazines as a teaching resource. But practitioners should be aware that the readability level of two magazines reviewed for this project (*games TM* and *The Official Nintendo Magazine*) was far higher than the games themselves due to long sentences and multi-syllable words.

If you visit the gaming section of a bookshop or library there are many different titles available, from strategy guides to graphic novels based on game characters. Some of these will be accessible to adults with lower literacy levels, particularly due to the visuals used throughout the texts. For this research we selected a strategy guide to *World of Warcraft* and found it had an average readability of 13, Level 2.



Games publishers are also recognising that players want to engage with narrative away from the game play. One of the biggest games of 2011 so far is the heavily character and narrative based *LA Noire*. It's set in Los Angeles in 1947 with players being challenged to solve a range of different crimes. Games commentator Charlie Brooker calls *LA Noire* "interactive fiction²²" and interestingly games publisher Rockstar Games recently announced a special collaboration with Mullhond Books to publish a short story collection

²¹ Emery, D. (2010). *PC Zone magazine is to shut after 17 years*. [Online]. Available from: <http://www.bbc.co.uk/news/technology-10641398> [Accessed: 18 June 2011]

²² Brooker, C. (2011). *Hollywood shuns intelligent entertainment. The games industry doesn't. Guess who's winning?* [Online]. Available from: <http://www.guardian.co.uk/commentisfree/2011/may/23/gaming-makes-hollywood-look-embarrassing> [Accessed: 24 May 2011]

alongside the title, with contributions from well known thriller writers²³. With games such as *LA Noire* proving popular with the public, the strong correlation between gaming and narrative looks set to continue.

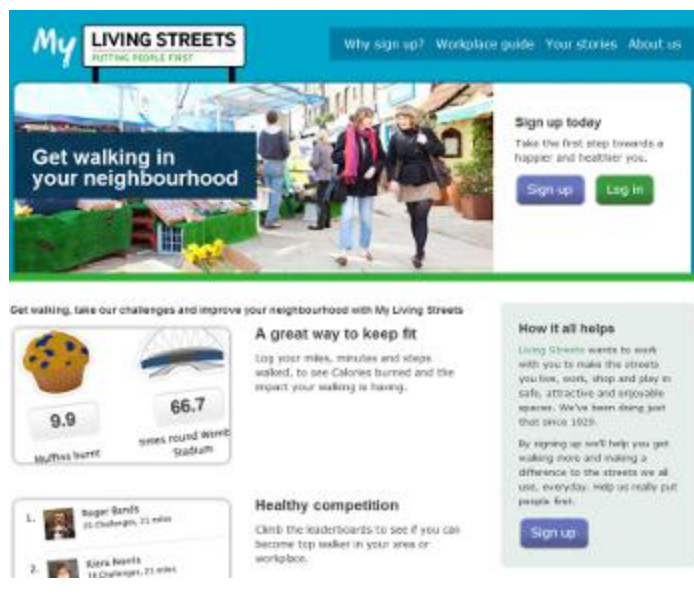
Games mentioned in development process

For the research and development process of bringing a digital gaming element to the Six Book Challenge, The Reading Agency and PlayGen reviewed existing games on the market for their game play and use of text for the target audience.

Digital versions of gamebooks were reviewed, alongside other types of interactive text on mobile and console platforms and websites aimed at the target audience, two examples of which are given below.

Sleep is Death is a storytelling game for two players. It's a creative sandbox where two players can develop their own narrative. Each player gets 30 seconds to decide what is happening next, before control being handed back to the other player. The interface is quite rudimentary, with users having to create some of their own artifacts, but at the end of a story the game generates an easy to upload comic version. Once game play is understood, the literacy level of this game would depend on the input from users but the opening story has a readability of 10, Entry Level 3.

My Living Streets (mylivingstreets.org.uk) is an organisation that wants to make the streets of the UK a safer, more attractive and enjoyable place to live in. The site has a gaming element where users get walking by taking challenges (and earning points), logging their steps with the aim of trying to keep fit. The site was selected as part of the research because of its clear, consistent layout, use of instructional graphics and accessible text – all key elements for the adult literacy audience. A review of the site gave it an average readability of 12, Level 1.



²³ Rockstargames (2011). *L.A. Noire: The Collected Stories is Now Available in Full as a Free Download at eBook Stores Now (for a Limited Time)* [Online]. Available from: <http://www.rockstargames.com/lanoire/news/16611/la-noire-the-collected-stories-is-now-available-in-full-as-a-fre.html> [Accessed: 18 June 2011]

As part of the development process the Six Book Challenge games were tested with a mix of adults in literacy classes who were asked about their experiences of technology and gaming (see page 28). The users played a variety of different games on all platforms (Xbox, Wii, PlayStation, PSP, DS, mobile) including 'hidden object' games, *Wii Fit*, *Just Dance*, *Mario Kart*, *Mario Party*, *Professor Layton* series, *Salem Secrets* and *Street Fighter*. The users we interviewed (mainly parents) enjoyed playing games they could dip in and out of because their time was limited.

They played 'hidden object' games online or on their Nintendo DS. There are many hidden object free websites as well as commercial games. One such example for the DS is *Mystery Stories* where you play the role of a top New York journalist on holiday in the Caribbean who has to solve the mystery of a kidnapping and missing artifacts. During the game play there are mini puzzles to complete and over 1150 hidden objects to be found. Users navigate the game by reading instructional text and following dialogue. The readability of this game was an average of 11, Level 1.

Mystery Stories (Avanquest Software 2009)



Another popular genre was mystery or crime games such as *Hotel Dusk: Room 215* (see page 16) or the *Professor Layton* series, with users enjoying the challenge of having to solve puzzles to continue the game.

Professor Layton and Pandora's Box is the second game in the series. The game follows Professor Layton and his apprentice Luke as they travel across country by train to solve the mystery behind the strange box that is supposed to kill anyone who opens it. Reading ability is a necessary skill for these games as the mini puzzles are solved by closely reading instructional text and interpreting hidden meaning. The readability of this game was an average of 11, Level 1.

Other platforms: games researched

As new technology comes on to the market there are even more platforms for gamers to use. Touch pad technology is becoming more popular with 2011 seeing the release of the iPad 2 and more and more games added to the Apps Store. As with other consoles, it's quite difficult to know where to start with selecting and reviewing games. We chose a game to review that has a strong narrative, with the use of text being integral to the game play and one that we felt would be of interest to the target audience.

Broken Sword is an adventure game series revolving around the adventures of George Stobbart and Nico Collard in several fictitious stories. When playing the game on the iPad the user follows the narrative, (reads) engages in dialogue with other characters and solves riddles they encounter during the game. The readability of this game was an average 12, Level 1.

Relevant research and our own research process mainly focused on purchased video games. However, there is also a large market for free, online games accessed through websites and social networks. The game that has made the most headlines in recent years is *FarmVille* (developed by Zynga), which at its peak had over 80 million subscribers. Gaming is a fickle business and it's since lost its appeal with users, in May 2011 dropping to the number 2 spot of games played on Facebook being taken over by *CityVille*²⁴, also developed by Zynga.

CityVille is a social city-building simulation game where players become the mayor of a virtual city and oversee its development. Players can also visit their neighbour's city and complete tasks, so earning reputation points and then using those to purchase goods. To play the game users have to read text on screen and, as part of the social network Facebook, can message other players. As with *FarmVille*, the game has a low readability of 10, Entry Level 3.

Conclusion

As with our previous report *Gaming for Reading*, the games we've chosen for review are those that encourage users to read text as part of the game play. Interestingly we have found that most are accessible to less confident readers in terms of word and sentence length. We hope this selection will be useful for practitioners and especially those who are not gamers for whom the scale of choice in the gaming world can be overwhelming.

²⁴ Glasser, A. J. (2011). *Top 25 Facebook Games for May 2011*. [Online]. Available from: <http://www.insidesocialgames.com/2011/05/03/top-25-facebook-games-for-may-2011/> [Accessed: 18 June 2011]

Chapter 4: Developing and testing two games

The research and development phase of this project involved working with a games developer to explore options for making a digital version of the Six Book Challenge. The Reading Agency chose PlayGen, a company who have a wealth of experience in creating playful solutions for engaging players of all ages with serious subjects (see www.playgen.com). We wanted to draw on PlayGen's creative approach to gamification and encourage them to explore approaches to engagement in text that we hadn't previously examined.

This chapter covers our brief to PlayGen, development and user testing of two games, reflections on the process from PlayGen and a review of the outcomes from The Reading Agency.

Brief

The initial phase of the development involved briefing PlayGen on the required outcomes of the project and providing them with detailed information on the target audience which they hadn't worked with before.

As stated earlier, the Six Book Challenge is already a game. Participants have a clear goal – read six books (or text in other formats), and along the way unlock achievement (incentives), track progress (diary) and head towards their epic win (completion, presentation of a certificate and often local celebrations). Though the Six Book Challenge (SBC) is a simple concept, its impact extends beyond completion of the scheme. There is a built-in element of progression whereby participants have begun to establish a new reading habit and are motivated to continue. PlayGen recognised the gaming aspect of the Six Book Challenge and were keen to explore how this could be transferred to a digital format. In order to do this they drew on their knowledge of some of the main motivational drivers identified in adult audiences:

- **Social relationships:** to make new friends, to meet a need for associations and friendships.
- **External expectations:** to comply with instructions from someone else; to fulfil the expectations or recommendations of someone with formal authority.
- **Social welfare:** to improve ability to serve mankind, prepare for service to the community, and improve ability to participate in community work.
- **Personal advancement:** to achieve higher status in a job, secure professional advancement, and stay abreast of competitors.
- **Escape/Stimulation:** to relieve boredom, provide a break in the routine of home or work, and provide a contrast to other exacting details of life.
- **Cognitive interest:** to learn for the sake of learning, seek knowledge for its own sake, and to satisfy an inquiring mind.

The audience profile for this particular project was more challenging to define, but we drew on The Reading Agency team's practitioner knowledge and previous experience of developing online content such as BBC Skillswise, WebWise and RaW. It was important that content was created with two audiences in mind, the primary audience – end users (learners) – and the secondary audience – gatekeepers (practitioners). Experience in this sector has demonstrated that literacy learners tend to be reached through gatekeepers such as tutors, library staff or Union Learning Representatives, but then go on to be more autonomous when using the tools to which they've been signposted.

To give PlayGen a broader picture of the primary audience, learner profiles were provided to demonstrate that they can range from late teens to old age and be learning in many different settings including formal classes in colleges, workplaces or the community, family learning and more informal groups in the library.

PlayGen also created a technology profile of the target audience which concluded that most learners would be more likely to carry a mobile phone than a book and that most would have access to a PC either at home if not in the classroom. This was added to through responses to specific questions put to learners during user testing (see page 30).

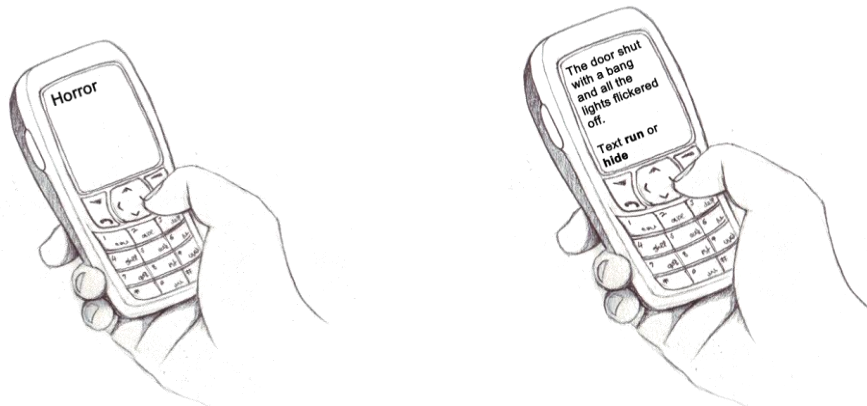
Research

The Reading Agency and PlayGen undertook the next phase of the project in parallel, with both researching existing products. Examples included traditional printed texts already being used by the audience (see www.readingagency.org.uk/findaread), games played by and websites targeted at the audience. Project teams also reviewed existing games that used text as an important part of game play (see Chapter 3 above).

Ideas

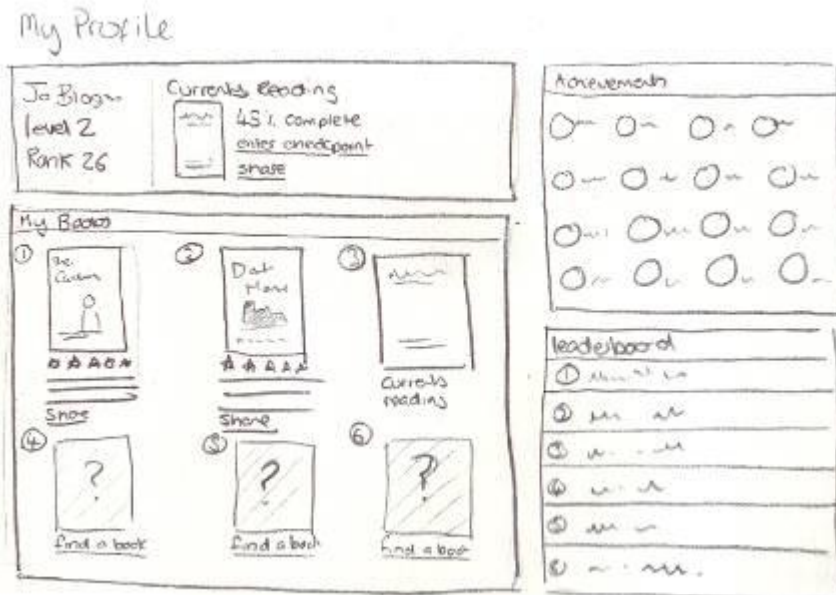
The next phase involved PlayGen coming up with a range of approaches for digital games to promote reading. Of the six ideas presented to The Reading Agency, two were chosen for development:

- A text-based game: an interactive narrative where users control how the story progresses through selection of one of two options at frequent points in the narrative. This approach had particular appeal because it uses a technology familiar and available to virtually everyone – the basic mobile phone. It is also an interactive way of presenting text to the audience and putting them in the role of 'author'.



- A social game: a web-based game which takes elements of the Six Book Challenge (challenges, social interaction, recording reflections) and turns them into a social network where users can track reading progress, complete small reading challenges and collaborate with other readers. This game could initially be developed for the web, with an additional feature being an 'app' or mobile version

of the game. It could also have a section for practitioners to input challenges for themselves and for their learners.



The two initial ideas were developed by PlayGen with input from The Reading Agency and then tested with user groups.

User testing

In the time available for testing (mid-May to early June) we sourced groups of learners via practitioners. This was not straightforward as the required schedule clashed with half-term and preparation for exams but nevertheless we identified four very different settings and a total of 28 learners. We would also have liked to run user testing with adults not currently engaged in formal learning but this was not possible in the timescale.

Testing took place over a two-week period enabling The Reading Agency and PlayGen to consider feedback and tweak the materials in between sessions. Before the fourth and final session The Reading Agency and PlayGen revisited the aims of the project and challenges of developing content for such a diverse audience with fairly limited experience of using digital technologies. At this stage, The Reading Agency supplied further guidance and a hypothetical 'user journey' for the social game to demonstrate how the key gaming elements might be used for engagement.

Testing locations

i) College

BEC is an adult learning centre in Rotherhithe, now part of Morley College, where students undertake literacy and numeracy classes. Students from two literacy classes were interviewed – one at Entry Level 3 geared to re-entering the workforce and the other for students working towards a childcare qualification. User testing was carried out with 11 students (female aged 30s – 50s) and one practitioner.

Reading for pleasure is regularly promoted to students at the centre, though reading no longer takes place in class due to time constraints. They have strong links with the local library and have bookshelves in the centre, a reading group in the library and fliers for titles such as Quick Reads. They were being encouraged to take part in the Six Book Challenge with support from the library.

There is little use of technology in the classroom, partly due to limited practitioner skills and access to technology. The practitioner interviewed had used *Brain Games* in her teaching and she could see the benefit of social games to encourage discussion about reading in and outside the class.

ii) Workplace

A workplace-learning centre, Transport for London's Learning Zone in Victoria, hosted the second session. Students are working towards literacy (including ESOL) and numeracy qualifications, on a roll-on, roll-off course, with some learners having one-to-one tuition. The centre has run the Six Book Challenge for over three years with more than 100 learners taking part. Students are all in employment, with ages ranging from 30s to 60s, of multi-ethnic backgrounds, male and female. User testing was carried out with 6 students (both male and female).

Students are encouraged to engage in reading through the Six Book Challenge and there is a lending library in the Learning Zone. Classes have also visited the local library, where in advance the tutor has collected information about students' interests so when they visit they can be shown where to find relevant titles and how to search on the library database.

They have a smart board in the classroom and the tutor uses interactive quizzes and online games (e.g. BBC Skillswise) with the class.

iii) Library-based class

Brent Adult and Community Education Service uses a range of community locations to deliver its classes. This session of user testing was carried out at Harlesden Library with three elderly students (male and female), all of whom were familiar with the Six Book Challenge.

iv) Family learning centre

Park Futures Family Centre in Havant is an independent centre offering learning opportunities to families, located next to a primary school. They have one Skills for Life practitioner who runs family learning and Skills for life courses (Literacy and Numeracy). Students are mostly young mums who want to improve their skills for personal development and enable them to help their children with school work. The centre has no ICT facilities and no technology is used in the classroom. User testing was carried out with eight students (all young mums) and one practitioner. This session took place a couple of weeks after the first round of testing enabling PlayGen to modify the games in response to the initial feedback.

Current use of digital technology

In preparation for user testing The Reading Agency drew up a list of questions that participants (primary and secondary users) would be asked about their use of technology and games. The results across all user testing locations showed extensive access and experience of using digital technologies despite relatively low levels of literacy.

1. Do you own, or have access to a computer?

90% of the students said they had at least one computer at home. The remaining 10% had access to them at libraries or the adult learning centre, and most of these were older students – grandparents who, having not grown up with the technology, had not seen the need (or still didn't feel the need) to get to use and learn it. About 2% of those who owned a computer at home said that they didn't use it, or they had to get a family member to help them use it.

2. Do you play games on the computer?

52% played games on the computer. 48% said they just didn't have time as they were always busy looking after children etc.

3. Do you use Facebook?

60% said they use Facebook, and about half of these regularly played games on the social networking site too.

4. Do you own a mobile phone?

55% owned a normal mobile phone, 42% owned a smart phone (either iPhone, BlackBerry or Android), and just 3% didn't have a mobile phone (these again were the much older students – grandparents).

5. Do you play games on your phone?

35% said yes, the regularly play games. The remaining 65% said they didn't, but used it only for texting and calling.

6. Do you have a games console?

59% said they have a games console. Nearly 80% of these had a Wii.

7. Do you prefer to play with others or on your own?

65% said they preferred to play with others (mainly their family), the other 35% said they like solitary games, or games where they have the most control.

Development and testing of the text-based game



For the first three user testing sessions, learners and practitioners were shown screen shots of the text-based game and its content on PowerPoint slides. This gave them several points at which they could decide on one of two courses of action in an adventure story (e.g. 'Fight the dragon' or 'Go to the door'). Learners were encouraged to navigate

through the game and give feedback on content, usability, accessibility and enjoyment. For the fourth session, the game was made even more lifelike so that learners could click on their choice of how the story should proceed as if on a mobile phone. The key responses are listed below:

- Instructions needed to be made clearer at the start.
"What do I have to do – make sure it's easily understood – have simple instructions at beginning."
- Users would want to be able to replay, or go back and choose another path.
"It's interesting to choose your own path, encourages you to re-read it."
- Learners wanted to be able to select from different genres such as romance, mysteries, fantasy and crime.
"Easy to use, but I didn't really enjoy the story I was given. I'd like to be able to choose a romance or thriller. "
- Small screen makes it difficult to handle extensive text – and yet it has the benefit of breaking up text into bite-sized chunks for those put off by the amount of text on the page of a book
*"My phone's screen size is quite small. I do send text messages but it would be quite different to read a lot of text on it."
"It shows a good amount of text – not overwhelming."*
- Learners could use this game in a variety of places, and often outside the time constraints of traditional classroom based teaching.
*"It's easier to carry around than a book, and you always have your phone on you."
"I'm always looking after the kids, so this would be a good thing to dip into while I'm waiting for them to fall asleep or finish their meals."*

Content turned out to be key so PlayGen added a 'menu functionality' so that users could be sent a list of genres and invited to text back with the genre they want as below.



"Looking at the book summary and choosing the book would be a big factor on whether I would use it."

PlayGen's reflections on the text-based game

Due to its simplicity and complete accessibility, PlayGen felt that this idea would be an excellent way to get adult low literacy learners into reading more. Nearly everyone has a mobile phone, people carry them with them everywhere they go, and the content would

work on the most basic of handsets due to its simple technical requirements of sending and receiving text messages.

The only downside with this simplicity is that it is quite limiting and initially not practitioner led, i.e. the practitioner has no control over what the users do. There are no challenges or rewards, but the user is congratulated when finishing a read. However, it would definitely benefit from being introduced through tutors or library staff in order to get people involved. Practitioners could even recommend places for students to start, or set them homework challenges such as to 'complete a read'. If students were all asked read a particular story, the practitioner could get them to discuss how their story ended and the reasons users took different paths when they next meet.

PlayGen has developed similar games. One example is *Choices and Voices*, a branching scenario game aimed at older teens where they become one of the main characters in a story. Based on their choices to questions from the other characters, the game can end in a variety of ways (i.e. burning down their school, saving their homes from demolition, etc.). This is a two-part game that relies heavily on facilitator-led discussions, as students are asked why they chose particular paths and why they think the story ended how it did.

PlayGen felt that this sort of framework is 'mature' enough for older users, such as the target audience, as their engagement is heavily dependent on the type of content. The logical next step for this idea would be to begin trialing on mobile phones and actually sending learners 'Choose your own adventure' reads through text messaging.

Reading Agency review of the text-based game

Creating a text-based game for the mobile platform would ensure that nearly 100% of adult literacy learners could have access. Often, when exploring the use of technology in education there is a tendency to use the 'latest shiny toy'. By selecting a low-tech version, more users would be able to engage with the content.

Some users commented that they had tried to read some stories on mobiles (for example via the Kindle app) but had not found suitable material. By making the narrative interactive and broken into chunks this can make it more accessible to users who do not have strong literacy skills. Reading texts on a mobile platform removes the barriers presented by the fear of picking up a large, printed book and the interaction element makes reading fun and more game like. In addition, text for such a game could easily be adapted for a range of different reading levels.

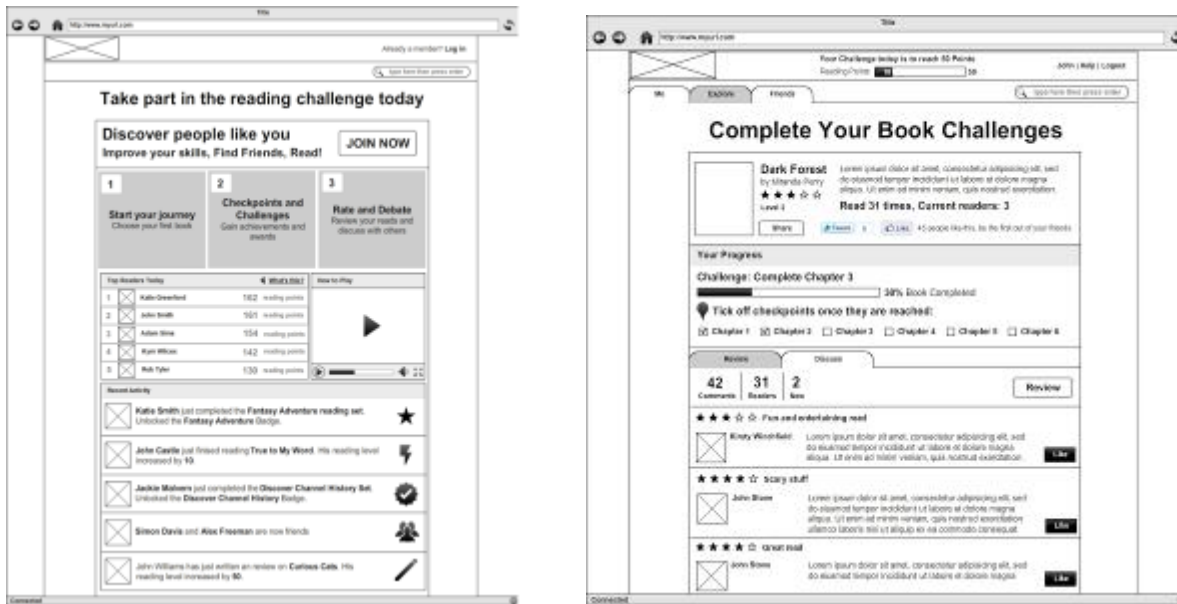
There is also the possibility of exploring the mobile text platform to deliver linear narrative content. With Skills for Life publishers looking for new, cost effective, ways to reach the audience, perhaps text is one method.

Practitioners were also keen to explore how they could use mobile text narrative with learners, e.g. creating learning activities based around text, encouraging students to discuss content away from the classroom and sending students 'chapters' to read between lessons.

Development and testing of the social game

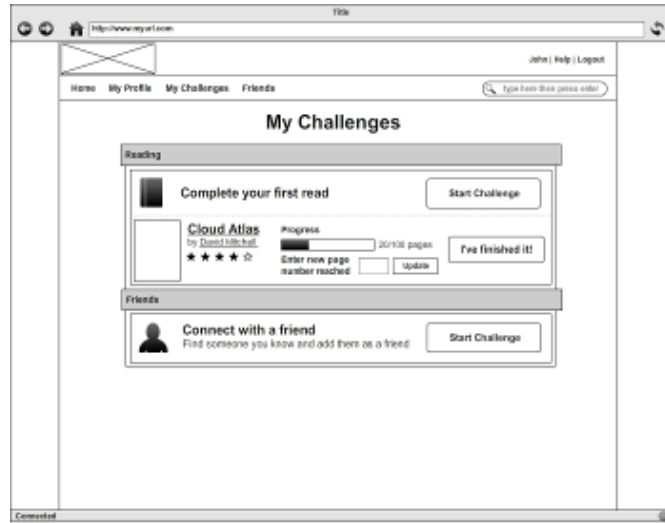
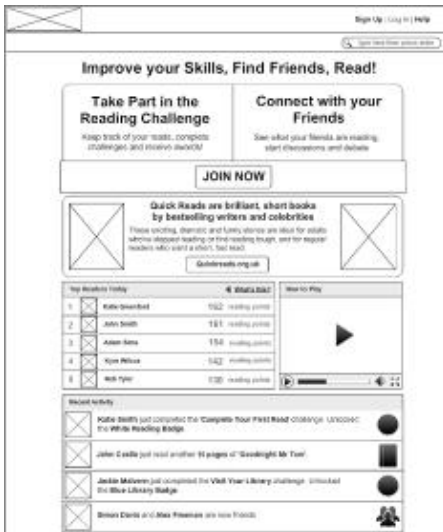
This design combined two ideas from the original brainstorm – a ‘Foursquare’ game for books and an online version of the Six Book Challenge reading diary incorporating challenges around reading and connecting with friends and other learners. It went through several iterations, mostly to make it simpler, as various elements were tested with learners.

In order to test the first ideas, learners and practitioners were shown a series of ‘wire frames’. See the initial feedback below.



- The homepage was a bit confusing with too much going on.
"Front page was a bit overwhelming at first and seemed quite complicated. Should be less on a page and spaced out more. There's too much info on first page, not quite sure what to do at the start. Where do I start? There's a lot here."
- Learners liked the idea of keeping track of their reading and letting others know how far they had got but they were confused at the way the checkpoints had been laid out (i.e. linked to page lengths available from Amazon).
"If you are a busy person, it's good to quickly check off pages/checkpoints and it would help you read it more, but what if you reach a page that doesn't have a checkpoint for it?"

PlayGen re-designed and simplified the interface, giving a clear call to action on the homepage and the benefits of joining in (see below left). They kept the checkpoint idea but now gave users the option to type in whatever page they had reached themselves (see below right).



- Users needed clearer guidance but soon got more confident about using it. *"Needs step-by-step instructions."* *"After a while I would find my way round it well."*
- Users liked the challenges and rewards. *"Challenges get you going and encourage you to read more."*
- Learners liked the social interaction – recommending reads and seeing what others are reading (see below). This would help give students (especially newer students) a sense of support away from the classroom, and allow practitioners a way to encourage and help them out of hours. *"The only friends that I really share books with are people from the creative reading group so would actually really like a site like this as I don't have many friends to share books with and this would help that."*



- The learners also seemed to think that it would be good to introduce the game through their classes, and it would also kick-start their friends' list as everyone in their group could join together.
"I quite like to do stuff on my own, so tutor could introduce it to us, but I would like to do the rest myself."
"Would be nice to do it as part of my reading group as we would all have people to play with straight away."
"Should be introduced through reading groups and libraries and spread through word of mouth."

Based on this PlayGen developed a page for the secondary audience – the practitioners/tutors/library staff – as an extra 'admin' panel that would allow them to create their own challenges to assign to groups of learners (see below). The tutors seemed to agree as it would be a great way to keep the class engaged after lessons and even after they finished their course:

"I can see this working better here than a physical reading group," said one tutor. *"We could launch it in a class, but after 3 hours, I'm not available as the class ends, so this is something they can continue outside of the class too. As they go back to employment, they can continue by themselves. Students that finish the course have nothing to do, but this would be a good way to keep contact going as well as giving them a good thing to do."*

The screenshot shows a user interface for a web application. At the top right, there is a user profile section with the name "Aranda Olowo" and links for "Help" and "Logout". Below this is a navigation menu with "Home", "My Profile", "My Challenges", "Friends", and "My Groups and Challenges". A search bar is located to the right of the navigation menu.

The main content area is divided into two sections:

- My Groups:** A table listing three reading groups:

Group Name	Members	Action
Reading group 1	6 Members	Add Members
Reading group 2	9 Members	Add Members
Reading group 3	12 Members	Add Members

 Below the table is an "Add New Group" section with a "Group Name" input field and an "Add" button.
- My Challenges:** A section showing a challenge assigned to a group.

Challenge Name	Description	Assigned to	Action
Complete classroom reading for next week	Finish "The Polar" ready for discussion next week	Reading group 1 (X)	Assign to

 Below this is an "Add new" section with "Challenge Name" and "Description" input fields, an "Assign to" dropdown menu (currently showing "Reading Group 1"), and an "Add" button.

Look and feel for the social game

On completion of the user testing phase, comments were fed into the next stage of developing the social game – the look and feel. See one of several examples developed by PlayGen below.



The aim of the designs is to make the site feel as if it was aimed at an adult audience and also get across the key messages of recording reading, taking part in challenges and connecting with friends. Visual symbols were designed to represent different activities / challenges such as visiting your library or sharing a read with a friend. Sadly there was no time to test these designs with the audience.

The next steps would be to begin developing it online. There is also the scope to create a mobile app that would allow people to continue challenges, record their reading and conn

PlayGen's reflections on the social game

PlayGen could see that reading isn't a part of life for many learners they met and that adult learning centres have the potential to break this cycle and get people reading again. They felt that the social game would help bring their learning back into their homes and possibly get others, especially family members, to participate as well and understand that reading can be fun as well as important.

PlayGen commented that creating a specific social game for such a broad audience with complex needs relating to their low literacy levels and lack of confidence with the written word was "near on impossible". Our designs were a framework for this, taking into account their motivations and abilities, to develop a 'social game' where users 'build their own world' through recording books that they have read and enjoyed, discussing with others of similar interests, as well as connecting with friends. The challenges are a tool to

help encourage players to engage but playing on their motivations to achieve personal advancement.

However, testing the idea and conversing with the target audience really showed how diverse they were. We had students ranging from late 20's to late 70's, the younger ones definitely were more confident with computers, but the older ones were not completely new to the technology. A vast majority of the users had children (or grandchildren) and were very family orientated – spending the day looking after their children playing computer games only with them etc. One of the main comments that came up was that their 'children would love this too'.

Several of the users said that as well as for adults, it would be a great way to get children more involved in reading:

"Overall, very good, feels like any people could use it, particularly kids at school to encourage to read."

"Good to aim at children too – if they did something like this it might encourage them to read more outside the classroom."

"I will definitely tell my daughter – she is at uni, and she likes to read."

PlayGen felt that due to lack of confidence with computers on the part of some learners, that the game would best be introduced through the tutor in a class, so that the student can all begin together and connect as friends to give them a good starting-point. Once they are confident (based on user experience with the wireframes, after playing through once, they all found it simple, easy and fun to use) the learners can continue their reading journey using the game at home and in their own time.

Reading Agency review of the social game

The social game is more closely linked to the existing Six Book Challenge although the challenge aspect of the game is related to a wider range of activities than just completing texts. The aim of this was to aid students in developing a reader identity, e.g. through visiting a library, recommending a read to a friend or trying something new. Users would be rewarded when they engage in different types of literacy activity.

The challenge and reward aspect of the game proved popular with learners, as did the ability to track reading. The social aspect was deemed to be of benefit, with learners keen to share recommendations, see what others were reading and discuss reads with their peers away from the classroom.

Practitioners also discussed different ways they could use the application, particularly if they could set up groups of users. They were interested in setting challenges for their learners, messaging them and tracking their activity.

To tie in with other social media the social game would also have to be available as a mobile app. This would allow users to track their reading and engage with other users while on the move, as is becoming more common place in social media with the increased ownership of smart phones.

Some users also suggested bringing the two games together so that they could read the interactive text in the social game. This clearly has potential but it negates the benefit of

the text-based game with its use of a technology to which there is almost universal access.

We learned from the iterative design stages of this project that this particular audience needs a lot of guidance and clear instruction when using applications. Testing the next stage – look and feel – with some clear user journeys will be key.

Overall conclusions

The research, design and testing process of developing digital content to engage adults in reading provided some very useful insights, not least the extent to which adult literacy learners are coming into contact with games through their home and social life. In comparison, there was not much evidence of the use of technology or games in the classroom.

Both games could serve the needs of the adult literacy audience. The text-based game introduces digital text in an engaging and low-tech format to a wide range of users. The social game brings the supportive, collaborative element of social media to reading, allowing new readers to challenge themselves in the company of others who are making the same journey towards becoming a 'reader'.

Chapter 5: Observations from the think tank event

We tested findings from the research and development process at a think tank event held on 14 June at the Free Word Centre. Attendees were as follows:

- Stuart Edwards, Deputy Director Quality Improvement, Further Education and Skills Investment Director, Department for Business, Innovation and Skills
- Charles Beckett, Relationship Manager, Digital and Creative Economy, Arts Council England
- Susan Easton, Project Manager, NIACE
- Jill Attewell, consultant and former Programme Manager of MoLeNET, Learning and Skills Network
- Kathryn Roberts, Producer, BBC Skillswise
- Noyona Chanda, Director, LLU+ at London South Bank University
- Rebecca Liaucius, Skills for Life tutor, Morley College
- Carl Cross, Librarian, Derbyshire County Council
- Kam Star, Chief Executive, PlayGen
- Annah Hutchings, Lead Artist, PlayGen
- Ruth Harrison, Senior Project Manager, The Reading Agency – digital development
- Sue Jones, Senior Project Manager, The Reading Agency – young people
- Genevieve Clarke, Senior Project Manager Adult Learners, The Reading Agency
- Michelle Treagust, Project Manager Adult Learners, The Reading Agency

The Reading Agency outlined the context for the project and PlayGen presented the two gaming approaches and user reaction to them.

Attendees represented a variety of interests but with a shared belief in the potential of games to motivate and engage learners both within and beyond guided learning hours in the classroom.

Debate focused on two main questions leading to the following key observations:

- i) What does this research and development process tell us about the potential for games to engage learners in reading?**
- Lack of literacy skills is perhaps less isolating in a world less dominated by print but still stands in the way of individual progression
 - Use of digital technologies can create a bridge between classroom activity and self-study between classes
 - Virtually all learners have access to and use mobile phone technology
 - The social aspect of reading, supported by social media, has a multiplier effect, acting as a strong motivational trigger for engagement
 - A social game can be played on a global scale but also more locally to involve face-to-face interaction between group/class members
 - Use of digital content is a valid and appealing way for people to practise their reading skills at a level that suits them
 - Interactive narrative puts the learner in the role of 'author'
 - It's absolutely the right time to harness technology and play to the strengths of digital technologies that learners are already using
 - Benefit of 'getting stuck in' quickly to a story on screen

ii) **How can practitioners make the most of learners' own access to technology and experience of playing games and what support do they need?**

- The time is ripe to make use of technology because learners are using it in their everyday lives
- Practitioners need to go beyond using technology simply to support traditional teaching methods but this requires a change of mindset, awareness of the benefits and plenty of support and guidance
- Institutional blocks on access to the internet and social media can severely hinder educational use of these technologies – endorsement at the highest level nationally could help to solve these issues locally
- Access to technology during learning sessions depends upon the setting, e.g. college easier than community
- Tutors need to be reassured that they still have an important role but that it might need redefining, e.g. they could be involved in creating digital content

Chapter 6: Recommendations

This has been a short but very useful project. It has reinforced the relevance of learners' own digital lives for policy and practice in the learning and skills sector. It has explored two gaming approaches linked to the Six Book Challenge, both with potential for further development but distinctively different in their choice of technology platform. And it has highlighted the range of existing games that can be used to engage reluctant and under-confident readers in text. But most of all it has provided new thinking on innovative ways in which people with literacy needs can be motivated and supported both within and beyond the classroom.

Based on this project and our thinking since publication of our *Gaming for Reading* report last year, we now recommend the following actions by different sectors:

Policymakers

- Endorse use of the whole range of digital technologies including gaming by learning organisations as a way of engaging potential and existing learners in text and motivating them to practise and improve their skills
- Encourage and support use of digital technologies such as games and social media by practitioners as a way of introducing more innovative practice rather than just as a support tool for traditional teaching methods
- Encourage institutions to open up access to these technologies for the benefit of their learners and practitioners
- Make clear that reading for pleasure, using print or digital content, is an integral part of literacy provision because of its power to engage learners, motivate them to practise their newly acquired reading skills and help them to progress to further learning
- Ensure that learning opportunities and provision are as relevant and appropriate as possible for learners' everyday lives and needs, including their own use of digital technologies such as mobile phones, the internet, games and social media

Researchers

- Explore the impact of digital technologies, and specifically gaming, on adults' acquisition of literacy skills rather than relying on research focused on children and young people
- Investigate the use of and impact of digital technologies such as gaming on potential and existing learners' literacy practices both in their everyday lives and in the classroom

Practitioners

- Make use of learners' personal use of technology, including gaming, in the same way they would use learners' special interests and hobbies or examples of books they've read
- Integrate digital technologies such as gaming into pedagogical development rather than relegating them to a supporting role

Games developers

- Introduce new standards around accessibility issues when designing games so that they can be used by the broadest audience

- Work with The Reading Agency to explore how game play can be used to encourage engagement with text and help people to reinforce their learning and improve their literacy and communication skills

Publishers

- Work with The Reading Agency to explore 'gamification' as one way of making texts more appealing and accessible
- Build partnerships between games developers and learning and skills specialists to consider how texts might help to achieve learning outcomes through presentation in a different format

The Reading Agency will now:

- call for greater liaison between learning and skills agencies, policymakers, practitioners, researchers, games developers and publishers to encourage more joint working in support of audiences with literacy needs
- hold an annual think tank event on the evolving links between digital technologies such as gaming and engagement in reading of all kinds
- launch a gaming dimension to the Six Book Challenge in which people can take part by playing games that involve some engagement with text
- add a minimum of 20 further games to our database for new readers at www.readingagency.org.uk/findaread in preparation for the Six Book Challenge 2012
- decide how to take forward either or both of the gaming approaches developed for this project in order to benefit our target audience of adults with low literacy skills
- fundraise to take development to the next stage
- consider the fit of a social game across all programmes run by The Reading Agency whether for adults with literacy needs (Six Book Challenge), general adult readers (Reading Groups for Everyone), young people (My Voice) and children (Summer Reading Challenge and Chatterbooks)
- create a digital community around the Six Book Challenge through use of social media in order to drive participants to online activity, thus supporting parallel initiatives such as Race Online 2012 and the BBC's First Click campaign