

## **1. Introduction**

There is an exciting, engaging, innovative genre which has swept across the world in the past ten years. It's not a multi million pound industry; it isn't dominated by corporations; it doesn't need marketing or promotion to draw people in - and yet it has quickly gathered a strong worldwide community; it doesn't use complex technology and requires no support hotline.

Wouldn't we kill, as further or higher education teachers, to harness these elements; to have an exciting, engaging, innovative course - students who get drawn in and hooked on our subjects? Maybe, there are lessons to be learned!

Before I continue, and by way of demonstration, I'd like you all to help me with a later part of this paper. Stuck to the underside of chairs in this room are a number of brightly coloured business cards. The colours are significant, and between you - without moving from your seats or impacting adversely on this presentation - I'd like you to be ready to deliver some quotations for me in about six minutes' time. Good luck!

The genre we're talking about is that of *Alternative Reality Games*. Somewhat defying a short neat definition, I'll turn to two of the genre's community sites to explain:

“Alternate Reality Gaming (also known as... immersive fiction) is an interactive fusion of creative writing, puzzle-solving, and team-building, with a dose of role playing thrown in. It utilizes several forms of media in order to pass clues to the players, who solve puzzles in order to win pieces of the story being played out.”

(<http://www.unfiction.com/history/>)

“Instead of requiring the player to enter a fictional game world, ARG designers attempt to enmesh the game within the fabric of the player's real world [to] by harnessing as many media technologies and interfaces as possible. By doing so, ARGs expand the frame for the game beyond the computer monitor or television screen, effectively making the entire world the 'game board.'”

([www.ARGology.org](http://www.ARGology.org))

“[Often,] the puzzles that must be solved cannot be solved alone. This genre of game [It] almost requires participation in a group or community that works together to win past the more difficult hurdles.”

(<http://www.unfiction.com/history/>)

## **2. A Quick overview of ARG games**

It is beyond the time constraints of this paper to give even a brief history of ARGs to date, but I shall pick up one quote from Jane McGonigal, Lead Community Designer for the ARG *I Love Bees*, as noted in her subsequent academic study of the game:

“The distributed narrative of I Love Bees... was revealed in clue-sized pieces over the course of four months across hundreds of Web pages, dozens of blog posts, thousands of e-mails, and over 40,000 live MP3 transmissions... These massively distributed puzzle pieces were tracked down and documented by individuals, but compiled and analyzed by the group. Once a new piece of content was turned over to the collective, it then would be analyzed by thousands of players on dozens of different community forums.” (McGonigal 2008, p206)

This incredibly strong community was able, when 1000 pay phones started to ring across the world at predetermined times four seconds apart, to mobilise itself to answer them all and relay messages from each one to the next in the chain, collecting and analysing the data as they went.

But it is not just massive collective challenges which typify ARGs; high levels of engagement and community development occur with much smaller game elements and audiences.

A more recent UK-based ARG, *Perplex City*, relied on smaller, superficially discrete puzzles which connected in to a larger underlying story.

In *Perplex City*, players purchased packs of cards - much like those for football sticker albums - where each card contained a puzzle to solve. By collecting and solving as many puzzles as possible, players earned points on a global leaderboard, receiving minor gifts for hitting particular targets, and discovering bits of the underlying story as they went. As the game wore on, the story took a front seat, with live events culminating in several clued-up teams trawling the woods of Northamptonshire for a small buried cube: the grand prize worth £100,000 to the finder.

*Perplex City* is also interesting because it was the first ARG to adopt a self-financing model: untied to any film or entertainment wallet, it used the sale of puzzle cards to fund the game development, live events and grand prize. A new ARG currently being developed for a leading charity and developed entirely by unpaid volunteers, aims to take this model further and use the ARG as a fundraising tool.

If ARGs can be used as a way to raise money and yet still result in a deeply engaged and motivated audience, surely there are possibilities here for education: not to raise money (although our Vice Chancellors might like that aspect) but to raise interest and connection with the subject?

### **3. The Perplex City Study: how I got hooked**

My personal interaction with ARGs began in 2006 as a player in *Perplex City*. By that stage, a growing community of players was discussing the puzzle cards, and actively following up clues and trails in the game.

In my first few weeks, I was struck by the care the community took over introducing new players to the game concepts, and integrating them warmly into itself. Although the puzzle cards are easy to grasp by the uninitiated, the ARG concepts of following leads and uncovering codes on websites etc. require a lot more scaffolding, and players were quick to help me out on this score.

As time went on, I found that I was being drawn in by the game: I was enjoying the puzzles and seeing my score climb the leaderboard; I was following story events closely on the discussion forums; I was even researching areas I'd previously had no interest in, in order to solve particular puzzles or clues (I'm now an expert in subjects as diverse as colour gels for stage lighting and nautical signalling flags!).

It was at this point that I realised what a valuable lesson I was learning in educational practice: I'd achieved and seen levels of engagement and communal interaction in my fellow players never before seen in my higher education context. Here were people gulping in information and setting forth on week-long collaborative research projects, just to solve a minor clue in an online game.

I now had a new mission to add to my hunt for the buried silver cube: what is so engaging and community-encouraging about an ARG, and how can I tap into *this* liquid gold to pour back into the higher education context?

I undertook a year long action research project, playing Perplex City and interacting with the community. As a result of this study, I identified several aspects I believed to affect engagement and create a community of practice.

A year after the buried cube had been discovered, and the ARG had finished, I invited those members of the community still actively posting to the game's forums (of which there were still several hundred) to complete a questionnaire around the research areas I had identified: effectively targeting the most engaged players. I received 45 detailed responses within a week.

## 5. Three themes apparent for Higher Education

The three broad areas I chose to focus my research on were partly a result of my experiences of the game during the participatory study, and partly due to key areas of need I perceived to be present in my own Higher Education context.

They differ slightly, although not purposefully, from studies conducted by McGonigal, Bryan Alexander at NITLE, and the handful of other researchers who have turned their eye to this genre. Work here has already been done on collective intelligence, detailed text/narrative studies, and on facets of the design and technical issues peculiar to ARGs. Whilst not directly relevant to a humanities-based higher education perspective, I utilised these studies in the production of my list of key features, as we shall later see.

### 5a. Engagement/motivation

The first area, and that of my greatest concern and interest, was that of engagement. What was it that made ARGs so attractive both in the short-term, and over a sustained period of months or even years?

It is not just the length of the engagement, though, but the depth. A blogger, writing about Perplex City during its period of highest popularity, likened their connection to the game to:

“the process of getting yourself hooked on intellectual crack cocaine. You look at your score online and start to dream of glory. Because the game isn't just about solving puzzles, it is much more than that”

*EgoAnt writing at <http://www.stumbleupon.com/url/www.perplexcity.com/>*

One of the respondents to the questionnaire confirmed this analogy to addiction:

“I would describe myself as addicted to perplex city. I like to consider myself a citizen in fact!”

You might at this point be wondering about the demographic of perplex city players. Is it composed of geeks, computer game fanatics, those already addicted to online networks and games? Not being much of one myself, I was interested in the responses given to the questionnaire when the players were asked how they interacted socially on a typical day:

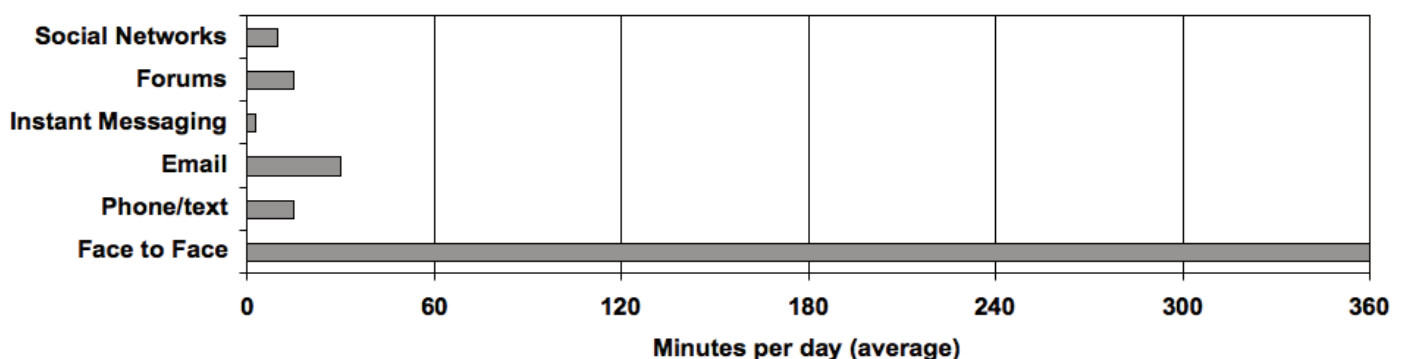


Figure 1: Broad forms of social interaction (minutes per day)

So we can see that the most engaged players are not geeks who sit in front of their monitors and rarely see the light of day; nor even modern web-savvy individuals who flick between MSN and Facebook all day at work.

The same group were asked how much time and involvement they put into the game at its peak:

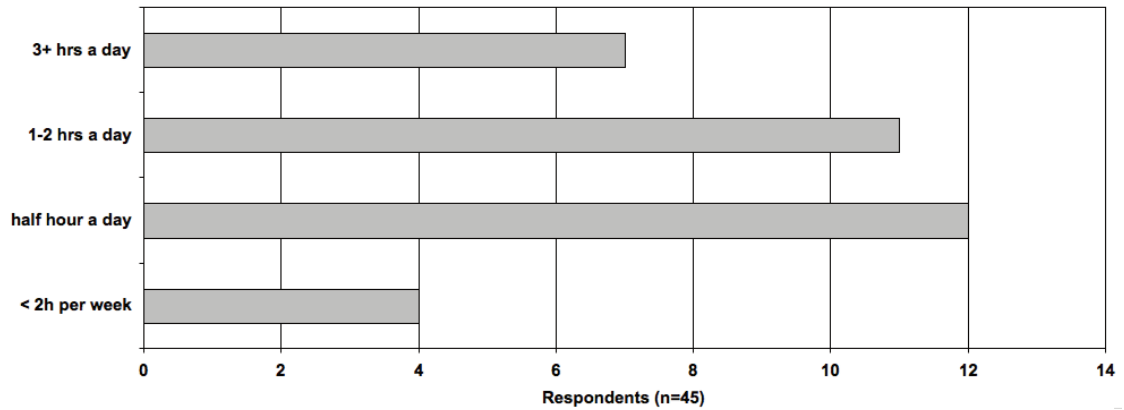


Figure 2: Time spent playing Perplex City per week, by player

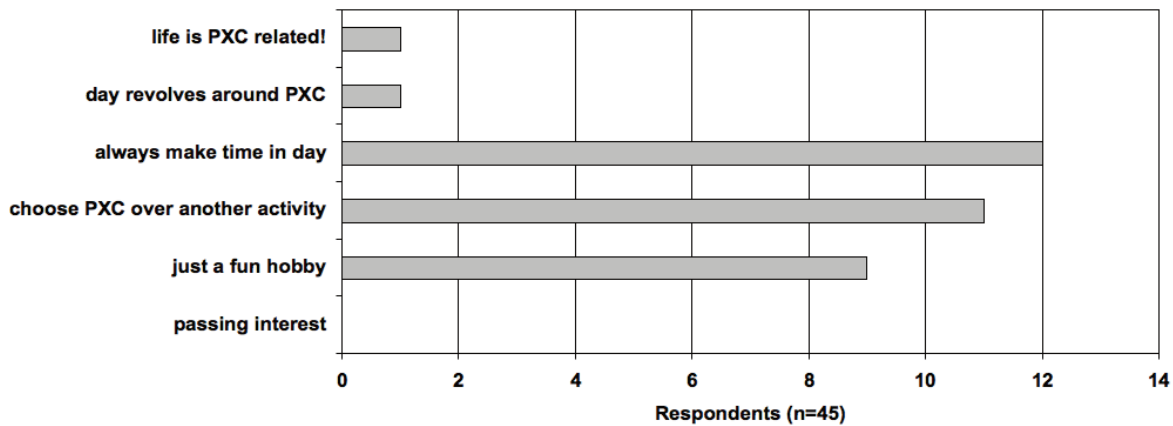


Figure 3: The effect of Perplex City on the players' lives

Players noted:

“Physically (getting out there hunting for objects, shopping for cards, writing down and solving clues) 1-2 hours. Mentally (thinking about it) upwards of 6 hours per day at my most involved.”

“my wife quickly came to resent PXC, even though she bought me my first pack of cards, and solved my first blue. Even my kids would talk about ‘daddy’s silly cards’.”

On average, players were spending 1-2 hours a day on the game, as a definite life choice.

What is it, therefore, that made these seemingly normal individuals maintain such an active and deep interest? Breaking the ARG into its rough constituent parts, I asked the players which aspects they actively visited or turned their attention to: see Figure 4.

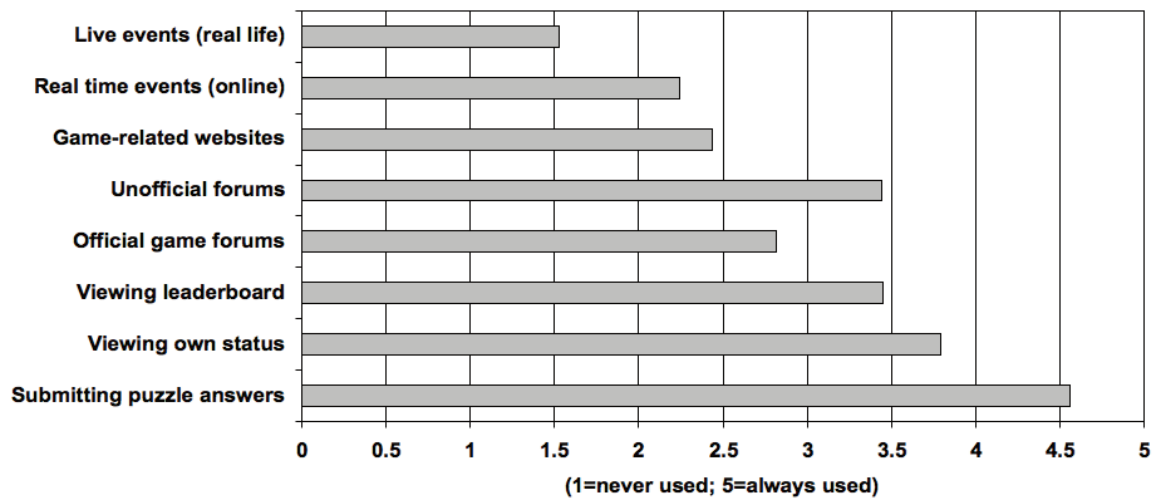


Figure 4: Aspects of the game which players visited/used

Later in the survey I also asked them a direct question about the aspects of the game they found most motivating, in terms of retaining their interest in the ARG:

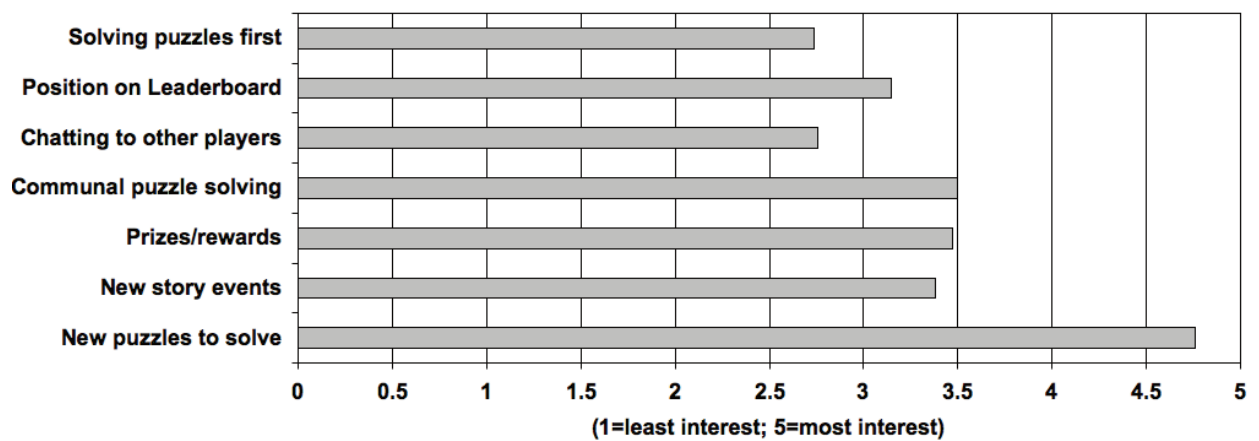


Figure 5: Most motivating aspects of Perplex City

Across both answers, three areas stand out: that of solving puzzles and scoring points for them; the communal activities surrounding the challenges and discussion forums; and the regular feed of story and new challenges.

The combined process of solving puzzles at a range of difficulties, both individually and with communal help; with the successful submission of answers and the award of points which in turn led to a climb up the game's very visible leaderboard - seemed to strike a chord across all players.

"I took [puzzles] with me to work and would pin them up at my desk to keep me thinking of them throughout the day."

Another player noted: "I knew a few other people playing and enjoying charting my progress against theirs." - this mixture of individual and collective activity is one which resonates well with academic syllabus; but also with students' work: they are concerned firstly with completing their essay and handing it in, and secondly with comparing the grade they receive to their class mates'.

One player neatly summed up the importance of this comparison amongst peers:

"Am I addicted to the puzzle, or the points??"

## **Narrative/story**

The use of narrative is key to ARGs: an underlying story or often stories help to give players a sense of purpose, of developing understanding and knowledge of the ‘alternative reality’ over time. The links between narrative and engagement have, of course, been explored at great length in educational research - both in traditional written or face to face material (eg. Rossiter, 2002), and in online contexts (eg. Paulus, Horvitz and Shi, 2006) and this link was demonstrated well during my participation in Perplex City. Activity was never so frantic as when a particular event occurred in the story, often connected with a ‘live’ time-bound aspect.

Another aspect of this link was the way characters in the story are discussed and sympathised with/criticised/mourned as real people. Here is an example post discussing two principle characters in the story, Violet and Scarlett:

“Where’s Scarlett?”

OK so Violet is off to get herself killed but what’s happened to Scarlett? She does an interview with us and has now seemingly disappeared...argh maybe we should stop interacting with perplexians if this is what’s gonna happen to them!” Julesweb Mon Jun 06, 2005 3:32 am  
<http://forums.unfiction.com/forums/viewtopic.php?t=10864&start=60>

One of the players pointed to the link between real and virtual ‘characters’:

“I enjoy the characters, both in game and the “characters” on the forums”

## **5b. Problem Solving / Learning and research**

My second area of research concerned the learning aspects of ARGs: problem solving, investigation, research and collaborative/collective learning.

There were many examples of players learning new skills, conducting - in some cases lengthy and detailed - research into areas they previously had no knowledge of. This process is illustrated well by two of the players’ responses in the questionnaire:

“It was totally unlike anything I had ever been involved in before, was exciting, had a super sense of community, and opened up many new areas of interest and research (probably into areas that I would never otherwise have found out about).”

“the puzzle cards encouraged me to think laterally, especially on the harder cards. I got a great sense of accomplishment when I’d crack a blue, purple, black or even silver on my own...”

(the colours being grades of puzzle difficulty)

This demonstrates one of the highest forms of engagement: having such an interest in an entity to expend hours of free time connecting with, understanding, and trying to solve particular challenges; not just once, but repeatedly. It is also a direct link to the kind and level of engagement departments in higher education would like their students to exhibit.

## **5c. Peer/community support**

The third and final area of research concerned the game’s community; and particularly its similarity to a community of practice as described by Wenger (1998).

From my entry into the game as outsider, followed by considerate and effective scaffolding by existing players, into (by the end of the game) a fully fledged member of the community; my participation in the game gave me a detailed insight into this model community of practice.

Other players experienced the same process, as evidenced by many conversations I had during my participation, and by comments in the post-game questionnaire:

“I always enjoyed the general discussions that arose around each of the cards. There is a real thrill in communal working towards a solve on a particular cards, getting nudges and hints from other players.”

“The most incredible moment in the course of the game was when you realized that you were part of something HUGE, and, even if you didn’t have much contact with the majority of the community, you were still playing a vital role.”

“The combination of aspects, most of which had been done before... is what got me involved, but ultimately I stayed for the community. There was/is always something to do, someone to talk to, etc. I’ll never be ‘properly’ bored until the [community] sites close down.”

The community provided its own support structures outside of the official game, developing, in Wenger’s terms, “a local regime of competence” (1998, p184) and a sharing of “stories, explanations [and] descriptions” (op cit, p185). Peer support was fast and effective, with questions from new and experienced players alike receiving helpful responses from the community.

“There is a real thrill in communal working towards [solving] particular cards, getting nudges and hints from other players.”

“the community is, to me, probably the most important aspect. Get rid of that, get rid of the game.”

“I tried my best to give help with cards and other puzzles (though it was usually me who needed the help with those!)”

“Together we could help each other, but alone we would probably have failed.”

“I’d usually point new players to resources to catch up, as well as write tutorials.”

“It took a while to get into using the forums because it was already a built up community but I found them very friendly and helpful.”

“It’s great that we have so many different people getting together to answer impossible questions.”

## 6. List of key features

My research across these three broad areas persuaded me that, without a doubt, there are lessons which education could learn from Alternative Reality Games.

The perfect approach would be, of course, to create a complete ARG within an educational environment and on an educational topic - much like the ARGOSI project underway in Manchester aims to do (Whitton, et al.), and a handful of other institutions here and particularly in the United States have either implemented or are in the process of planning.

However, I believe that the lessons we can learn from ARGs don’t necessarily need to be applied as a fully fledged ARG; indeed, there will be many of you working in institutions or departments where a full ARG simply wouldn’t be possible given the political, administrative or conceptual constraints. To this end, I have constructed a list of key features, drawn principally from my research but drawing from earlier research in the area by Bryan Alexander, Jane McGonigal, Cristy Dena and others, which ARGs offer and which would be of value to educational contexts wishing to increase engagement, critical problem solving skills and communities of practice within the subject:

**Problem solving at varying levels** (graded challenge)

- enable students to pick their own starting level and work up from there

**Progress and rewards** (leaderboard, grand prize)

- this could also be assessment

**Narrative devices** (characters/plot/story)

*Note: doesn't have to be fictional: academic subjects have histories, themes, news etc.*

**Influence on outcomes**

*as researchers we don't think that we are working towards a known answer or statement; and we would like our students to think in the same way: by letting them decide or influence some aspects of their course, this helps to scaffold their path into a critical academic thinker*

**Regular delivery of new problems/events**

*key to maintaining engagement. Thinking about ways to keep things moving without putting extra pressure on staff*

**Potential for large, active community**

*...which is self-supporting/scaffolding - the potential is less the smaller the group and the narrower the subject interest/specialisation.*

**Based on simple, existing technologies/media**

*this is an easy sell*

I'm not suggesting that all of these features need to be included in a course; but by taking two, three or four in detail, and bearing the others in mind, I think that the potential to improve engagement and motivation, critical problem solving skills, and foster a course-based academic community amongst its students, is within a course designer's grasp.

**7. Application: Case Study (Great History Conundrum)**

As a case study of this approach, I encourage you to visit the poster at this conference dealing with The Great History Conundrum, which is a research skills course I developed for historians, utilising several of the key features I identified.

Thank you.

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