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Applying gaming technology to healthcare student education

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# Game to Learn

bringing education to life



## Programme

- 09:30** Registration
- 10:00** Welcome and Introduction  
*Margaret McNulty, eLearning Alliance*  
*Professor Bernard King, University of Abertay Dundee*
- 10:10** Learning Games  
*Derek Robertson, Learning and Teaching Scotland*
- 10:40** Playing Safe with Channel 4 Learning  
*Adrian Hon, Six to Start*
- 11:10** Round-table Debate & Refreshments
- 11:30** Parallel Sessions A
- a. Console Area: Using the Wii for Rehabilitation
  - b. Hands-on: Try it Out: Six to Start's *Smokescreen* / 3MRT's *Inquizitor* / Skill2Learn's *Logicity*
  - c. Seminar 1: Multiplayer Leadership Development: [Helen Routledge, PIXELearning](#)
  - d. Seminar 2: Gaming Your Way to Office Success: [Steven Grier, Microsoft](#)
- 12:15** Wander and Learn – The Exhibitors
- 12:45** Lunch
- 13:45** Playing to Win, Corporate Games  
*Euan Mackenzie, 3MRT*
- 14:15** Educating the World, One Cell At a Time  
*Dr. Pamela Kato, University of Utrecht*
- 14:45** Round-table Debate & Refreshments
- 15:05** Parallel Sessions B
- a. Console Area: Playing to Learn on the Xbox 360: [Paolo Barone, Microsoft](#)
  - b. Hands-on: Try it Out: Microsoft's *Ribbon Hero* / HopeLab's *Re-Mission* / Pixelearning's *Leadership Game*
  - c. Seminar 1: Saving the World – Again: [Majid Al Kader, Skills2Learn](#)
  - d. Seminar 2: Using Gaming Technology Effectively
- 15:50** How to Get the Business Case for Games Across  
*Donald Clark*
- 16:20** Closing
- 16:30** End

# Welcome and Introduction

The eLearning Alliance/University of Abertay Dundee

*Margaret McNulty, Chair of the eLearning Alliance*

Margaret joined the Board of the [eLearning Alliance](#) in 2007 and has been Chair since May 2008. During this time, she has seen the organisation grow and strengthen into a powerful force in Scotland. With a committed staff and voluntary Board, the Alliance is the only organisation in Scotland that provides an integrated approach to learning across academia, the health service, local authorities and the private sector. It [provides excellent events](#) and outstanding value for money. The Alliance offers a unique forum for debate on common issues within and across traditional boundaries, highlighting good practice and spawning creative thinking and innovation.



Margaret is a management consultant with a dedication to lifelong learning. With a career that includes teaching, lecturing, training and coaching, she set up [Megaflow Associates](#) nine years ago. Her company specialises in strategic leadership development and coaching, with expertise in market focus and tailored customer engagement. She takes a global approach and has worked in Madrid, Bursa and across India.

*Professor Bernard King CBE,  
Principal and Vice-Chancellor of the University of Abertay Dundee*

Professor King was educated in Dublin and worked in industry and research prior to taking MSc and PhD degrees from the University of Aston in Birmingham. As Principal of the University of Abertay Dundee, Professor King is a member of the Association of European Universities (EUA) and the Association of Commonwealth Universities (ACU). He has been one of four British members of the Council of the latter organisation and currently serves as a member of its audit committee.



Professor King writes and lobbies on higher education matters, including funding, research and the future of Scottish higher education in the context of a globally competitive marketplace. He is currently Vice-Convener and Convener-elect (due to take office in August 2010) of Universities Scotland, and served on the Scottish Government's Joint Future Thinking Taskforce on Universities in 2007/08, and is a member of the Scottish Government's Tripartite Advisory Group on university policy.

## Learning Games

*Derek Robertson, Learning and Teaching Scotland*

Derek began his teaching career in Dundee in 1994. During his time in class he witnessed two boys, who were in his lower ability maths group, engaging with a complex problem-solving environment on the [Super Nintendo console](#). He was astonished at how they engaged with the problems, how they were challenged by them and how they used their own suite of strategies to solve the problems in order to be successful at the game. It made him reflect on the context of the game and why it facilitated such impressive abilities in children who had not shown it in the world of learning that they were expected to engage with in class.



This chance observation gave birth to Derek's interest and passion for games-based learning. Two years as an ICT staff tutor in Dundee City Council was followed by a position as a lecturer on the B.Ed(P) and PGDE(P) courses at the University of Dundee. This allowed him to establish games-based learning as a topic of study for his teaching students and then to his successful application to lead games-based learning initiatives for Learning and Teaching Scotland via the [Consolarium](#). Derek is now partnering local authorities and teachers to explore the impact of computer games and is [contributing to the growing body of work](#) that is helping to change the discourse about the position and practical application of games based learning in classrooms.

## Playing Safe with Channel 4 Learning

Adrian Hon, Six to Start



Adrian Hon, Co-founder and Chief Creative Officer of [Six to Start](#) is one of the world's leading Alternate Reality Game (ARG) designers, having been influential in the genre since its birth. Adrian previously studied neuroscience at Oxford University and Cambridge University, and is the founder of the innovative [Let's Change the Game](#) competition to produce an ARG to raise funds for charity.

In September 2009, [Channel 4](#) and Six to Start launched [Smokescreen](#) – a story game about online privacy, identity and trust. In the 13-part web adventure, players had to uncover a mystery on a fictional social network and in doing learn about some of the threats – and opportunities – posed by other people on sites like Facebook, MySpace and Bebo.

C4 Education are committing over half its £4.5m budget in 2010 to gaming projects; developing strong narrative games on a variety of themes and platforms. This is the largest commitment made by a UK broadcaster, and is causing a ripple of excitement in the UK indie gaming sector.

## Using the Wii for Rehabilitation

TBA



The fastest selling television video games console on the market today is the Nintendo Wii. Part of the reason for its success is its appeal to a wide demographic and use of an innovative wireless pointing device. In terms of games, along with platform-leaping Italian plumbers and kart-racing green dragons, a surprise hit has been the Wii Fit – an exercise game that has captured the interest of millions across the world.

Although the Wii Fit is fun, it is being taken very seriously as a tool to train physiotherapists and help patients with a wide range of ailments. Many physiotherapists have already begun to call on the Chartered Society of Physiotherapists to approach game console makers to include exercises specifically designed to aid physical rehabilitation in the form of a computer package.

This hands-on session will demonstrate the potential of the Wii Fit software and discuss some of the issues surrounding its use.

## Multiplayer Leadership Development

Helen Routledge, PIXELearning



Helen Routledge is the Instructional Systems Design Manager at PIXELearning Ltd. where she is heavily involved in the design of serious games destined for corporate training and development. With over 8 years market experience Helen has helped promote and evaluate games for learning in companies such as KPMG, Comcast and HP as well as in public sector organisations such as The Scottish Institute of Sport Foundation.

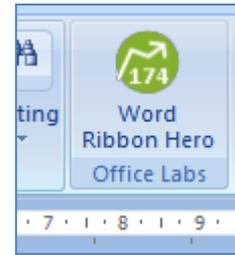
Helen's experience has gained her credibility and a name within the industry, as one of the innovators and entrepreneurs shaping and leading the industry. Her experience has resulted in her becoming a recognised figure on the international speaking circuit on the topics of games for learning for corporate training and education.

The Leadership Game, developed by PIXELearning, is a multiplayer serious game, where 4 individuals, each with their own mission must decide how to work together, how to lead, and how to escape 'The Island'. By combining leadership training exercises and a sandbox style environment, the team will be challenged to perform, compete, collaborate and achieve their personal missions.

## Gaming Your Way to Office Success

Steven Grier, Microsoft

It's probably true that the majority of Microsoft Office users don't use the suite to its full advantage – there are countless innovations that lie beneath the interface, but it can be hard to motivate users to spend time learning about them, even though productivity would most certainly increase as a result.



Ribbon Hero is a prototype game for Word, PowerPoint, and Excel designed to boost Office 2007/2010 skills. Players take on 'challenges', score points and compete with friends while learning how to make the most out of everyday applications.

The Microsoft Office Labs group worked with Xbox developers, specifically consulting with them on motivational strategies and factors in console games; the result is an approach so compelling that it just might change the way you think about training.

## Playing to Win, Corporate Games

Euan Mackenzie, 3MRT

For the last 7 years Euan Mackenzie has been CEO of 3MRT the Edinburgh-based games company. The company designs serious games for the education and corporate sectors, including the award-winning InQuizitor. He describes his role as, "what I do day-to-day is addict kids to studying using gaming software."



Over the last 18 years, he has had the opportunity to establish and run technology companies in the UK, Asia and US. In 2006, he co-authored and co-chaired a DTI report on the state of corporate e-Learning in the US and wrote the chapter on games-based learning. He has been an invited speaker and chair on games-based learning at many conferences, including Online Educa, Futurelab, BERR and BAFTA. He also briefs government on developments within the industry and is currently a board member of ScotlandIS. His talk will look at the use of games in the corporate sector, where they fail and how they might be successful.

## Educating the World, One Cell At a Time

Dr. Pamela Kato, University of Utrecht

A Harvard- and Stanford-trained psychologist, Dr. Kato is an internationally recognized leader in the fields of health psychology and video games. She is currently Senior Research Scientist of Gaming with the Patient Safety Center at the University Medical Center Utrecht in the Netherlands, where she is developing a serious game simulation to teach medical residents about patient safety.



Re-Mission, is a video game that takes the player on a journey through the body of young patients with different kinds of cancer. The game was created by HopeLab staff in collaboration with video game developers and scientific and medical consultants. Designed to be fun and challenging, the game helps players stick to their prescribed treatments and giving them a sense of power and control over their disease.

As co-founding president and CEO of HopeLab Dr. Kato played an instrumental role in the development and testing of Re-Mission for young cancer patients. As Principal Investigator of the Re-Mission Outcomes Study, she led the scientific research that demonstrated the impact of the game on treatment compliance and behavioural outcomes.

## Playing to Learn on the Xbox 360

Paolo Barone, Microsoft

Kodu is a new visual programming language made specifically for creating games. It is designed to be accessible for all ages and enjoyable for everyone. The programming environment runs on the Xbox and PC, allowing rapid design iteration using only a game controller for input.



Two years ago, the team at Microsoft Research began an after school program with non-profit group Girls Inc. and the University of Santa Barbara to see how the Kodu program helped youngsters progress in science, math, logic and problem solving. According to Chris Satchell, chief technology officer of Microsoft's interactive entertainment business, "The feedback was incredible; the children loved to build their own games."

Kodu, in its relative simplicity, is a classic content creator. Like Logo during the '60s and '70s, it's an educational abstraction of code. Its vocabulary is a series of icons depicting verbs and conditions – if/then clauses you use to form behaviours. Make one of those dangerous and you have yourself a challenge. Impose a victory condition and you have yourself a game.

## Saving the World – Again

Majid Al Kader, Skills2Learn

LogiCity is an interactive computer game with a difference. Aimed players under 25, it's a game set in a 3D virtual city with five main activities where players are set the task of reducing the carbon footprint of an average resident. As players work their way through the game they will pick up information about Climate Change, and some of the main ways in which everyone is currently contributing to the emissions of the main greenhouse gas (CO<sub>2</sub>) that causes Climate Change.



It places individuals in a virtual environment and lets them experiment and experience the potential effect that individual actions can have on the planet before it's too late. Users can travel to the future to see the direct results of their actions in real time by quickly fast forwarding to the year 2066.

Majid Al Kader, Managing Director of Skills2Learn, developed the game with the National Energy Foundation and British Gas as part of Defra's Climate Challenge programme to increase public awareness of Climate Change across the country.

## Using Gaming Technology Effectively

TBA

There is a wealth of existing gaming technology that could be used to enhance current learning and teaching practice. Indeed, there are numerous examples of COTS (Commercial Off the Shelf) games being placed in the hands of students and patients (in the case of Nintendo Wii when used for rehabilitation and exercise). However, there is always the nagging worry that the technology is not being used effectively:

"The fact is that anybody could go out and buy a Wii Fit and stand a patient on it and play around with it, but the important thing is being able to translate the context of the games to the rehabilitation of the patient."

This session explains how existing games technology has been applied to a teaching and professional context with due attention to underlying teaching and medical principles.

# How to Get the Business Case for Games Across

Donald Clark



Computer games have been used in learning for over 25 years, and to be frank, have had marginal impact. While the computer games industry has embraced technology and exploded in terms of impact, sophistication and revenues, games in learning remained a commercial backwater. The breakthrough was [Brain Training through Nintendo](#). However, games remain rather rare in education and training (two different markets). We have to be honest here and face up to several challenges:

1. **Marketing** 'Game' is an entertainment epithet and not seen as relevant.
2. **Wrong markets** Games work well in some markets and not others.
3. **Culture clash** 'Games' and 'learning' cultures are like oil and water.
4. **Psychology** It is not clear to many that games give a significant uplift in learning.
5. **Development** Using expensive 'games' engines is OK for consumer products but won't wash elsewhere.
6. **Poor tools** Lack of good 'tools' for games production.
7. **Public sector brakes** Public sector investment thwarts investment in learning games by publishers and others.

Donald will pose these and other challenges, but as a massive supporter of 'games in learning', suggest solutions. [Visit Donald's 'Plan B' blog here](#)

## Exhibitors



[eCom Scotland](#) is a leading authority in the field of online learning and assessment. Over the past 11 years they have worked with some of the most progressive organisations in the industry.

Founded in 1996 as a spin out company from the education sector, eCom Scotland rapidly became established as a fully independent company, forming an extensive network of links with industry specialists worldwide.



[Intelligent Assessment Technologies \(IAT\)](#) will be demonstrating ExamOnline, an innovative eAssessment platform which allows you to create, deliver, and mark superb e-assessments, all using a simple yet powerful web interface.

Uniquely, the platform incorporates computerised marking of short answer questions and provides sophisticated support for essay style examinations and hand drawn sketches.



[The Small Business Company \(TSBC\)](#) supports the online delivery of enterprise skills through its [Small Business Game](#), and its interactive training modules, which organisations use to boost traffic to their websites and deliver qualifications.