

# Dr DAVID FARRELL

## PERSONAL INFORMATION

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## WORK EXPERIENCE

	<i>Aug 2013 - present</i>	<b>Lecturer &amp; Researcher (Game Development)</b>
<i>Glasgow Caledonian University</i>	<p>I have written and taught university modules covering a wide range of design related topics (e.g. Game Studies, Level Design, Serious Game Design, User Interface Design, Preproduction, and Development) alongside supervising undergraduate and postgraduate dissertations. I've been involved in several research projects as primary or co-investigator contributing to conference and journal papers and have given dozens of talks at public facing and academic conferences. I have developed strong links with industry at the university by organising game jams and by creating a high profile series of invited talks which have led to industry driven projects being a key contributor to our undergraduate programme. In recent years, I have been acting as a design director, leading a small team of game developers on grant-funded research projects. We are currently finishing the development of a Serious Game / Augmented Reality App built using agile methods on principles of human behaviour change to help teenagers improve their diet and physical activity behaviours. Our app goes to trial in January 2021 and uses C# and Unity for the client and Firebase and BigQuery on our back-end.</p>	
	<i>2009 - present</i>	<b>Design Consultant</b>
<i>Freelance</i>	<p>I offer private videogame design consultancy to commercial game studios. Most recently I have been credited with contributions to BAFTA award winning game Observation, Scottish BAFTA award winning Stories Untold, and the Channel 4 published game Party Pugs.</p>	
	<i>Sept 2009 - May 2013</i>	<b>Part Time Lecturer &amp; PhD Student</b>
<i>Glasgow Caledonian University</i>	<p>Whilst I was primarily working on my PhD at this time, I also had a significant role as a part time lecturer at the university and contributed to the redesign of the undergraduate programme.</p>	
	<i>Jan 2007 - Jan 2010</i>	<b>Research Assistant</b>
<i>City, University of London</i>	<p>I lead the development of Serious Games about microbes, hygiene, and antibiotics as part of a large EU project (e-Bug). I engaged with academia as a researcher for the first time in this period, and contributed to many research papers in areas ranging from cross-country pedagogy to game design, storytelling, and user evaluation. I managed two artists on this project and worked closely with subject experts, school teachers and pupils to design two educational Serious Games that I programmed using ActionScript / Flash for the front-end and Lotus Domino for the back-end.</p>	
	<i>2005 - 2006</i>	<b>Co-Founder &amp; Game Developer</b>
<i>Business Playground</i>	<p>Business Playground aimed to help schools teach business skills through the use of Educational Games based on the Scottish curriculum. As the business was a start up, I had a wide remit, from engaging with clients (e.g. Learning Teaching Scotland / various local councils) and managing sub-contractors to contributing to our game's code (Java / MySQL) and design.</p>	
	<i>2003 - 2007</i>	<b>Founder (Web Technology Consultancy)</b>
<i>Paidia Software</i>	<p>I founded Paidia to help scale my freelance consultancy. At its peak, I was managing 5 sub-contractors who helped me deliver web-technology solutions for organisations who required full-stack bespoke application development. Clients included the Scottish Government, The Drum Magazine, and the University of Southern California. Technologies included Java, JavaScript, PHP, MySQL, Oracle, CSS.</p>	
	<i>2001 - 2003</i>	<b>Web Developer</b>
<i>DataVisibility</i>	<p>At DataVisibility I worked on the front and back-end of web technology projects using technologies including: PHP; MySQL; Oracle; Access DB; JavaScript, CSS; HTML.</p>	

## EDUCATION

	2020	Glasgow Caledonian University	
PhD		<i>An Adaptive Cognitive Walkthrough Method to Evaluate Serious Game Design</i>	
		My PhD focused on the integration of psychological theories with design practice. I adapted theories of emotion, Self Determination Theory, Mindset Theory, and Constructivist theories of learning to create and evaluate Serious Games. My main contribution is an adaptation of Cognitive Walkthrough that helps a designer to check whether they are creating an experience that aligns with their stated primary learning principles in a game.	
	2005	Glasgow Caledonian University	
Pg Dip Informatics (Game Design)		My postgraduate studies helped me to bridge the gaps in my education as a software developer to become a more rounded designer / developer. I took modules in psychology, 3D art and animation, graphics programming, and game design.	
	2001	Strathclyde University	
BSc Hons Computer Science		My undergraduate studies gave me a technical foundation that I benefit from even though I do less direct software development these days. Strathclyde's undergraduate was a classic CS undergraduate degree involving studying algorithms and data structures, principles of network technology, low level programming and hardware design, artificial intelligence, and Object Oriented Programming. This background helps me lead technical projects, contribute to software architecture design, and enables me to move smoothly between design and technology as required.	

## KEY RESEARCH GRANTS AND PROJECTS

	2017-2022	Engaging Adolescents in Changing Behaviour	
National Institute for Health Research		As Co-Investigator, I lead the digital intervention work package. I am responsible for £330k of this project and lead the design and development of the digital aspects of this complex diet and physical activity intervention. Working closely with young people and experts in behaviour change at the University of Southampton's MRC Unit, we have developed methods of co-design that we use to identify the values and desired experiences of adolescents. Our app, <b>LifeLab+</b> , is designed to appeal to these values by offering a social experience with a rich storyline that allows our users to lead their own health behaviour change rather than having one foisted upon them by adults.	£2.2m
	2019	SUSFANS	
EU Horizon		We were asked to help deliver a novel <b>data visualiser</b> for a Horizon project on sustainability in Europe. My team of developers and I were able to meet with the project team, identify a viable strategy, and successfully develop and publish the web based interactive tool within one month allowing the original research team to meet their grant obligation.	€11k
	2017 - 2018	Gaming Climate Futures	
Mellon Foundation		Working with political scientists from Purdue University, Utrecht University and Oxford University, we designed an interactive day long futures experience that helps real-world climate negotiators understand the implications of their decisions. I was responsible for leading a team of students and staff who built the game component ( <b>Earth Remembers</b> ) of this mixed media project. We exhibited the experience at the Conference of Parties negotiations in Katowice and Bonn. Since then, we have been invited by the diplomats who played our game to run similar workshops for their governments.	£15k
	2016-2018	LEVEL Project	
EU Erasmus +		I was the Primary Investigator on this project that aimed to improve the mental maths skills of pupils across Europe. Working with a Serious Games company from Germany and teachers from Germany, Scotland, Portugal, and Greece we created a mobile game ( <b>Enchanted Crystals</b> ) that uses a novel gesture based input system and a Harry Potter style game world to help pupils across Europe practice basic arithmetic. We were awarded Best Mobile Game and 2nd Overall Prize at the <b>7th International Educational Games Competition</b> .	€230k
	2016-2017	Game On Project	
EU Erasmus +		Working with school teachers across Europe, I helped research and identify best real-world practice for <i>using</i> games in the classroom. We published our findings in the form of a public-facing book " <b>Game Based Learning for Teachers</b> ".	€50k

## PUBLISHED ARTICLES

### *Journal Articles*

Strömmer S, Lawrence W, Shaw S, Simao SC, Jenner S, Barrett M, Vogel C, Hardy-Johnson P, Farrell D, Woods-Townsend K, Baird J. Behaviour change interventions: getting in touch with individual differences, values and emotions. *Journal of Developmental Origins of Health and Disease*. 2020 Jul 28:1-0.

Rose T, Barker M, Jacob CM, Morrison L, Lawrence W, Strömmer S, Vogel C, Woods-Townsend K, Farrell D, Inskip H, Baird J. A systematic review of digital interventions for improving the diet and physical activity behaviors of adolescents. *Journal of Adolescent Health*. 2017 Dec 1;61(6):669-77.

Farrell D, Moffat DC. Adapting cognitive walkthrough to support game based learning design. *International Journal of Game-Based Learning (IJGBL)*. 2014 Jul 1;4(3):23-34.

Farrell D, Kostkova P, Weinberg J, Lazareck L, Weerasinghe D, Lecky DM, McNulty CA. Computer games to teach hygiene: an evaluation of the e-Bug junior game. *Journal of antimicrobial chemotherapy*. 2011 Jun 1;66(suppl.5):v39-44.

McNulty CA, Lecky DM, Farrell D, Kostkova P, Adriaenssens N, Koprivová Herotová T, Holt J, Touboul P, Merakou K, Koncan R, Olczak-Pienkowska A. Overview of e-Bug: an antibiotic and hygiene educational resource for schools. *Journal of antimicrobial chemotherapy*. 2011 Jun 1;66(suppl.5):v3-12.

de Quincey E, Kostkova P, Jawaheer G, Farrell D, McNulty CA, Weinberg J, e-Bug Working Group, Goossens H, Adriaenssens N, De Corte S, Weinberg J. Evaluating the online activity of users of the e-Bug web site. *Journal of Antimicrobial Chemotherapy*. 2011 Jun 1;66(suppl.5):v45-9.

Lecky DM, McNulty CA, Adriaenssens N, Koprivová Herotová T, Holt J, Touboul P, Merakou K, Koncan R, Farrell D, Brito Avô A, Campos J. What are school children in Europe being taught about hygiene and antibiotic use?. *Journal of antimicrobial chemotherapy*. 2011 Jun 1;66(suppl.5):v13-21.

Lecky DM, McNulty CA, Adriaenssens N, Herotová TK, Holt J, Kostkova P, Merakou K, Farrell D, Olczak-Pienkowska A, Avô AB, Campos J. Development of an educational resource on microbes, hygiene and prudent antibiotic use for junior and senior school children. *Journal of antimicrobial chemotherapy*. 2011 Jun 1;66(suppl.5):v23-31.

### *Conference Articles*

Moffat D, Farrell D, Gardiner B, McCulloch A, Fairlie F. A serious game to give students careers advice, awareness and action. In *ECEL2015-14th European Conference on e-Learning: ECEL2015* 2015 Oct 1 (p. 396). Hatfield, UK: Academic Conferences and Publishing Limited.

Farrell D, Allsop Y, Shabalina O, Grace P, Malliarakis C. Reflections on applying a criteria to evaluate a serious game. *Creativity in intelligent technologies and data science*. 2015 Dec 1:734-47.

Farrell D, Moffat D. Applying the self determination theory of motivation in games based learning. In *European Conference on Games Based Learning 2014* Oct 1 (Vol. 1, p. 118). Academic Conferences International Limited.

Farrell D, Moffat D. Cognitive Walkthrough for Learning Through Game Mechanics. In *European Conference on Games Based Learning 2013* (p. 163). Academic Conferences International Limited.

Weerasinghe D, Lazareck L, Kostkova P, Farrell D. Evaluation of popularity of multi-lingual educational web games—Do all children speak English?. In *International Conference on Electronic Healthcare 2010* Dec 13 (pp. 44-53). Springer, Berlin, Heidelberg.

Kostkova P, Farrell D, De Quincey E, Weinberg JR, Lecky D, McNulty C. eBug-teaching children hygiene principles using educational games. In *MedInfo 2010* Jan 1 (pp. 600-604).

Lazareck LJ, Farrell D, Kostkova P, Lecky DM, McNulty CA, Weerasinghe D. Learning by gaming-evaluation of an online game for children. In *2010 Annual International Conference of the IEEE Engineering in Medicine and Biology 2010* Jan 1 (pp. 2951-2954). IEEE.

Farrell D, Kostkova P, Lazareck L, Weerasinghe D. CeRC Story-Game Engine: An open source technology to power story based investigation games. InProceedings of the Med-e-Tel, Luxembourg 2010 (pp. 181-185). International Society for Telemedicine & eHealth (ISfTeH).

Farrell D, Kostkova P, Lecky D, McNulty C. Teaching children hygiene using problem based learning: the story telling approach to games based learning. InCEUR Workshop Proceedings 2009 Sep 3 (Vol. 498). CEUR Workshop Proceedings.

De Quincey E, Kostkova P, Farrell D. Visualising web server logs for a Web 1.0 audience using Web 2.0 technologies: eliciting attributes for recommendation and profiling systems. InCEUR Workshop Proceedings 2009 Dec 1 (Vol. 485, pp. 69-78). CEUR.

P Kostkova, D Farrell, D Lecky, C McNulty. e-Bug Games for Children: Teaching Hygiene and Prudent Antibiotics Use using Web Games In the Proceedings of the IST-Africa 2009 Conference, Paul Cunningham and Miriam Cunningham (Eds), IIMC International Information Management Corporation, 2008, ISBN: 978-1-905824-11-3

## OTHER

### *Programme Committees*

- DiGRA 2019 (The 12th Digital Games Research Association Conference)
- DiGRA 2017 (The 10th Digital Games Research Association Conference)
- DiGRA/FDG 2016 (The first international joint conference of DiGRA and FDG)
- DH 2016 (6th International Conference on Digital Health)
- JCSG 2015 (Joint Conference on Serious Games)
- DH 2015 (5th International Conference on Digital Health)
- STEG10 - (co-organiser) (Third Workshop on Story-Telling and Educational Games)
- STEG09 - (co-organiser) (Story-Telling and Educational Games)
- EHealth2010 (3rd International ICST Conference on Electronic Healthcare for the 21st Century)
- ICIDS 2012 (The 5th International Conference on Interactive Digital Storytelling 2012)

### *Game Jams*

I organise and **participate** in multiple game jams each year at the university. In particular I have been the main organiser of our **Global Game Jam site** since 2013. I have additionally organised and participated in game jams on **inclusion and diversity**, **food sustainability**, **news**, and more.

### *GCU Games Insight*

For the last 7 years, I have organised a series of high profile invited talks at the university. These Games Insight talks attract students and professionals from across the country. Speakers have included BAFTA Breakthrough Brit **Jon McKellan** (Creative Director at NoCode), **Boyd Multerer** ("Father of the Xbox"), **Richard Lemarchand** (Lead Designer of the Uncharted Series) and other significant professionals.

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