Impact case study (REF3)

Institution: University of Roehampton	
Unit of Assessment: 23 – Education	
Title of case study: Playful Pedagogies: Developing New Literacies in Education through Game Design and Digital Play	
Period when the underpinning research was undertaken: 2009-2020	

Details of staff conducting the underpinning research from the submitting unit:

Name(s):	**Role(s) (e.g. job title):**	**Period(s) employed by submitting HEI:**
Angela Colvert	Senior Lecturer	September 2009 – present

Period when the claimed impact occurred: August 2013-2020
Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact (indicative maximum 100 words)

Dr Angela Colvert's research has developed influential new models of hybrid-literacies, ludic authorship and immersive play, informing the ways in which the digital literacy practices of young children are supported and evaluated in a range of educational settings. This research has had significant impact on international teaching practices in Early Years settings, in particular through:

  i. Informing the design and evaluation of digital games, including the Teach Your Monster to Read series, in order to improve literacies in early years, reaching approximately 20 million children across the globe;
  ii. Informing and influencing the policy and strategy of public bodies, governmental campaigns and educational associations;
  iii. Influencing the practice, strategies and creative collaborations of UK-based immersive theatre companies.

2. Underpinning research (indicative maximum 500 words)

Rapid developments in children's digitally-mediated play and the slow pace of innovation in curriculum design have led to an increasing disparity between the literacy practices many children engage in outside of the classroom and the literacy experiences they encounter in print-based school contexts. Despite the clear need to innovate in this area, work has been hindered as educators have not had access to theoretical and pedagogical frameworks which are nuanced and flexible enough to support their investigations and practices. Colvert's research addressed this issue through the development of new models of literacies which uniquely serve both as theoretical frameworks and pedagogical tools (**R1**, **R2, R3**). Colvert's models provide innovative pedagogical approaches to the teaching of new literacies in formal education through play and present fresh conceptualisations of transmedia authorship practices and associated literacies.

Colvert has investigated and theorised the pedagogical potential of peer-to-peer authorship of Alternate Reality Games (ARGs) in a primary classroom, and it was from this research that her models of literacies emerged (**R1, R2, R3**). Colvert's hybrid model of literacies foregrounds the interconnectedness of the three dimensions of a child's literacies (technical skills, cultural understandings and critical awareness), as they engage in the process of communication. Historically, literacy research and educational policy have often focused on one dimension of literacies (skills) which is assessed at one stage of the process (the production of a written outcome). Colvert's three-dimensional conceptualisation of literacies as a *dynamic process* provides a valuable alternative to such static views of literacy. The research suggests that in order to develop and understand children's literacy practices, every stage of the process needs to be brought into focus, including the design, production, dissemination and interpretation of messages. Communication, as presented in Colvert's model, focuses on both the creation and the reception of texts – writing and reading across a range of media.

Colvert's concept of ludic authorship extends the hybrid model by adding an additional layer related specifically to the process of game design and play. This model is unique as it is rooted in the concerns expressed by thirty 10- and 11-year-old game designers who, in a series of interviews, highlighted the importance of shaping fictionality, authenticity and agency. Colvert mapped these three concerns to the three dimensions of literacies: skills (shaping the fictional

context of play); cultural understandings (maintaining authenticity by drawing on a range of game and narrative conventions); critical awareness (negotiating the power dynamics between players and designers). Ludic authorship subsequently informed the development of a model of immersive play which was grounded in the analysis of interviews with artists, game-designers, teachers and children during a five-week immersive gaming project across three schools. This model of immersive play is the first to map the relationship between 'affect' and 'effect' during the process of play.

Colvert's models reframe traditional concepts of literacies – constituting an original and substantial contribution to the field of education. They reconsider play as a literacy practice and explicitly highlight the skills, knowledge, and understandings that are needed to engage in the new literacy practices associated with game design. They can also be used as a lens through which educators may critically examine the purpose and structure of the texts children produce as they engage in digital play. Colvert's models enable educators to incorporate new literacy practices into the classroom so that young people may be supported to become powerful participants in the contemporary communicational landscape. Her research provides vital evidence of the ways that digital literacies can be developed inside and outside of the classroom, extending the opportunities for teaching and learning in the twenty-first century. Colvert's models have been adapted by the education technology industry, makerspaces and immersive theatre companies.

In 2019, Colvert was awarded a grant from the British Academy to develop the hybrid model of literacies with teachers through the co-design of ARGs across schools in Lambeth (**G1**). In this project, she is working with six teachers across three schools to set up makerspaces in their classrooms as they explore 'theory in practice'. The first stage of this new research led to the development of an innovative assessment tool which was subsequently published by the UK Literacy Association.

3. References to the research (indicative maximum of six references)

R1 Colvert, A. (2019) Presenting a new hybrid model of ludic authorship: reconceptualising digital play as 'three-dimensional' literacy practice, *Cambridge Journal of Education* https://doi.org/10.1080/0305764X.2019.1660307. Listed in REF2.
R2 Colvert, A. (2017) Designing and Playing Peer-Produced ARGs in the Primary Classroom: Supporting Literacies through Play in *Alternate Reality Games and the Cusp of Digital Gameplay.* Approaches to Digital Game Studies, Bloomsbury. ISBN: 9781501316258. Available on request.
R3 Colvert, A (2012) **'**What is the MFC?' Making and Shaping Meaning in Alternate Reality Games in *Virtual Literacies: Interactive Spaces for Children and Young People*. Routledge. ISBN: 9781138810594. Available on request.

G1 BA/Leverhulme Small Research Grant. Playful Pedagogies: Developing New Literacies in the Classroom through the Design and Play of Alternate Reality Games (PI; 3/10/2018 - 31/3/2022). £8,491.

4. Details of the impact (indicative maximum 750 words)

Colvert's research and impact has been developed in praxis during her time at the University of Roehampton. Through her work and research into literacy and gaming, Colvert has established herself as a leading authority on gaming and literacy who combines expertise in digital game-design, curriculum implementation and the development of transmedia resources in collaboration with a variety of stakeholders (**R1, R2, R3**).

> **i.   Informing the design and evaluation of digital games, in order to improve literacies in early years**

One key collaboration has been with the Usborne Foundation. Colvert has worked as part of a small creative team – Teach Monster Games – to develop a series of three games to support children in the early stages of reading. During this process, Colvert's research into developing

literacies through play informed the design and structure of the games and shaped the methodological approaches to user testing (**R1**, **R2, R3**). The development of the games underwent the 'staged-process' that Colvert defines in her research, and she was directly involved in each of those stages. During the design stage, Colvert's research was instrumental in shaping the early concepts for the imagined worlds and the missions that children would undertake. In the production stage, Colvert frequently reviewed prototypes, defined the educational content and suggested new approaches and adaptations. In the dissemination stage, she supported the planning of approaches to promotion and drafted marketing materials for schools and parents, helping the company understand how the game could be integrated into school literacy practices and reach more children. During the interpretation phase, Colvert contributed to the analyses of the data collected from users, and applied her research insights, to inform the future educational priorities of the next stage of game-design. The development of each stage of game-design process was influenced by Colvert's research into the three dimensions of literacies. The Head of Teach Monster Games confirmed '*that the game was aligned with the cultural practices in schools and home relating to literacies and play'.* He recognised this as *'vital for our product'*. According to him, Colvert's '*research has transformed the team's understanding of the process by which children learn to read and throughout the process of creating the reading products she has consistently ensured that the gaming pedagogies were developed to support children's learning effectively'* (**IMP1**)*.* The three games that resulted from this collaboration – *First Steps* (2012), *Fun with Words* (2013) and *Champion Reader* (2015) – are collectively known as *Teach Your Monster to Read* (TYMTR).

Between July 2013 and December 2020, the games have reached over 27,000,000 individual players in both home and school settings around the world, but most prominently in the USA, UK, Canada and Australia, and have been played a total 264,815,029 times. In February 2020, the Department for Education recommended parents use TYMTR to help pre-school children learn at home. With the mandatory school-closures in the UK due to the COVID-19 pandemic, the games helped over 2.6 million children learn to read at home in March 2020 alone. TYMTR was number 11 in Apple's top paid apps of 2018 and was listed as the no.1 kids' app in the Apple app store in both the UK and USA. In 2019, it was listed in the top 10 most popular iPad apps (across all categories) (**IMP2**).

TYMTR has generated a huge amount of user feedback which indicates its significant impact on children's literacy. Feedback from teachers and parents – comprised of thousands of testimonials and reviews – shows how the games have significantly improved the engagement and reading skills of children, particularly in the USA and UK, both at home and in school settings. Comments made available at the GooglePlay store – where TYMTR has an overall rating of 4.4 stars out of 5 based on the assessment made by over 2,600 users – indicate the key role the games have had in the development of children's reading skills. One teacher noted that she *'started using this in my class and even my low ability readers have greatly improved…My entire department had adopted the program.'* (**IMP2**). The majority of the comments focus on describing how much children enjoy TYMTR and how it supported children to become able to read above the expected level for their age. Among thousands of comments, one parent (Lou) noted that *'This game enabled my child to read Roald Dahl novels before turning 5 years old. We were amazed at how much enjoyment and engagement was had from this game. It teaches all phonics sounds, segmenting and blending'*.

User feedback also evidences how engaging TYMTR is (**R1**, **R2**), which has been highlighted as a key factor in the continuous development of children's skills and a positive attribute of the game when compared against other literacy apps in the market. One user (Shel Martin) noted that this is *'the best game I have come across for teaching phonics. The progression makes sense and highly recommend to any child at any stage of their phonics journey'* (**IMP2**). One of the most detailed accounts of the impact of TYMTR on the reading skills of children was made by one parent who has used the apps to teach five children: *'As a home edder to 5 children this is one of THE best apps available on the market. The role play factor helps to keep them interested beyond the usual 15mins concentration lull suffered by other learning apps […] My middle child is severely Dyslexic and has struggled with hearing the sounds and then making the connection, and yet he*

has finally started to understand them. This is after only a few weeks of using this programme exclusively' (**IMP2**).

ii.   **Improving teaching practices in Early Years settings through influence on policy and strategy of public bodies and educational associations**

Following her involvement in the development of TYMTR, Colvert was invited to participate in the consultation process of the 2019 Government's 'Home Learning Environment Early Years Apps Pilot'. Through engaging in this process, Colvert's research into digital literacies contributed to the development of the educational criteria used to assess the quality of apps, with the aim of providing guidance to parents on which apps best support children's literacies in the Early Years (**IMP3**). This government initiative resulted in a selection of the highest quality apps, including TYMTR, being awarded a quality mark and recommended to families and schools as part of the government's Hungry Little Minds campaign, launched in July 2019 (https://hungrylittleminds.campaign.gov.uk). This three-year campaign aims to help parents understand the potential of apps to influence their child's learning capacity and that reading, playing and chatting can aid their development. This is one of the main governmental initiatives to provide better early-years education, promoting the development of young children through empowering parents and providing them with tools to support the learning process at home. Through the establishment of a quality standard for apps, parents across the UK now have access to accredited, trustworthy tools to support their young children's development.

In addition to influencing the policy on digital play in the UK, Colvert's research is also informing the UK Literacy Association's (UKLA) work on digital literacies. In their position statement on the subject, which cites Colvert's work (**R1**), the UKLA recognised that literacies in everyday life are rapidly diversifying, providing increased opportunities for children to engage with digital materials (**IMP4**). Alongside her colleagues from the UKLA's Digital Literacies Task Group, and building on her research and its key principles (**R1**), Colvert developed a new ***Digital Literacies Framework***. During 2020, the draft of this framework was tested in a pilot exercise with teachers, creating a series of case-studies which reflected the range of ways in which the framework influenced their practice. The framework will be the key resource to support the UKLA's efforts as they push for policy change and the integration of digital literacies in educational practice in the UK (**IMP5**).

iii.   **Influencing the change of practices, strategies and creative collaborations of UK-based immersive theatre companies**

Colvert's research has been crucial in the re-thinking of the practices and strategies of the British immersive theatre companies Punchdrunk Enrichment and Kit Theatre. Since 2015, Colvert has been working with Punchdrunk Enrichment to support the development of their educational and creative partnership work in schools. The company was embarking on new immersive theatre productions in school settings and wanted to understand the educational impact of integrating gaming into their work. Colvert undertook two research projects funded by the theatre company, summarised in the project reports: ***Prospero's Island: An Evaluation*** (2016) and ***The Oracles: Mapping the Affects and Effects of Immersive Play in KS2*** (2018) (**IMP6**). The latter project was the first time that Punchdrunk incorporated digital gaming, in the form of a virtual world, into the theatrical experience (**IMP7**). Adapting and drawing on her conceptualisation of 'literacy as process' (**R1, R2**), Colvert developed a new model of immersive play for Punchdrunk to help them better articulate the educational values and principles that underpin their work with schools and communities. This model mapped the relationships between affect (intensity) and effect (engagement) during their five-week gaming project in three primary school classrooms and is now being integrated into the company's core outreach work with teachers. The Director of Punchdrunk Enrichment described the findings as an *'epiphany moment'* for the company, resulting in the transformation of the way they conceptualise and evaluate the impact of their work, particularly in schools (**IMP7**). The Director explained *'Previously our evaluations focused on academic attainment but we now have a way of understanding and valuing the process. Our work embodies imaginative and immersive play and we now have a tool to support us to explore that - the value of that process of play - rather than focusing solely on outputs'* (**IMP7**).

Subsequently Punchdrunk invited Colvert to collaborate on the development of the 'Punchdrunk Learning Collective', a teacher network with seventeen schools across Haringey and Woolwich. Drawing on her model of ludic authorship (**R2**) (which frames game design as a dynamic process of design, production, interpretation and dissemination) Colvert proposed framing the three-year workshop structure to systematically support teachers in developing their understanding of and engagement with immersive play over an extended period. Colvert's model of immersive play was integrated into the first of their teacher training sessions and underpins the structure of their teacher workshops and network meetings (**IMP7**). It has been used to explore how immersive play can shape a child's affective sense of purpose, place, urgency and community and lead to a range of beneficial educational outcomes and effects. To date approximately 400 teachers and 12,000 children have benefitted from Colvert's research through their participation in the network, and they have actively engaged with the work of the Punchdrunk Learning Collective and begun to develop their immersive play in their classrooms.

Between January and July 2019, Colvert collaborated with KIT Theatre as the co-director and producer of a new immersive game designed to develop children's digital literacy practices through playful dramatic engagement with online and offline challenges and quests (www.dots.team). This game integrated Colvert's pedagogical approach to alternate reality game design (**R1**, **R2**, **R3**) and included challenges specifically designed to develop children's digital literacies and associated teacher planning tools. This collaborative project was the first time that KIT theatre developed a production to support digital literacies in this way. On the influence of Colvert's research, KIT's director stated that '*we have been able to demonstrate and articulate the educational potential of our work and there is no doubt that our partnership with Dr Colvert and the University of Roehampton has been a contributing factor in helping us secure funding for our company from the Arts Council. Her research had a significant impact on my work and practice'* (**IMP8**).

5. Sources to corroborate the impact (indicative maximum of 10 references)

IMP1 Testimonial from the Executive Director of Teach Monster Games outlining how Colvert's research shaped the Teach Your Monster to Read product. 23/06/2020.

IMP2 *Teach Your Monster To Read* report on user metrics and media coverage. The quoted comments can be found on pages 7-11. 2020.

IMP3 Testimonial from the Chair of the Expert Panel on Early Language, Literacy and Communication Apps outlining the impact of Colvert's model on the development of the Government's Quality Framework for Digital Literacy APPS. 22/06/2020.

IMP4 UKLA Position Statement on Digital Literacies. 2020.

IMP5 Testimonial from President of the UK Literacy Association. 10/12/2020.

IMP6 Document composed of one report and one executive summary concerning the two projects developed with Punchdrunk: *Prospero Island* (2016) and *The Oracles: Mapping the Affects and Effects of Immersive Play in KS2* (2018).

IMP7 Testimonial from the Enrichment Director at Punchdrunk. 09/07/2020.

IMP8 Testimonial from the Director of KIT Theatre. 03/07/2020.