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Institution: Ulster University	

Unit of Assessment: Communication, Cultural and Media Studies, Library and Information Management (34)

Title of case study: 2. Emerging Media, Learning and Organisational Practice – driving change in tourism and education in Northern Ireland

Period when the underpinning research was undertaken: 2014 - 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:
Dr Helen Jackson	Senior Lecturer in Media Studies	2005 - present
Mr Alan Hook	Lecturer in Interactive Media	2009 - present
Mr Adrian Hickey	Lecturer in Interactive Media	2007 - present

Period when the claimed impact occurred: 2014 - 2020

Is this case study continued from a case study submitted in 2014? N

1. Summary of the impact

This case study details the impacts arising from the work of **Hickey, Hook and Jackson**, reflecting their commitment to unlocking the potential of emerging media technologies in developing new forms of learning, knowledge and organisational practice, particularly in the areas of tourism and education in the Northern Ireland (NI) region. Impacts include:

(I1) enhancing the knowledge, technological skills and/or professional practices of tourism providers in developing initiatives to facilitate growth across the regional tourist sector in NI.
(I2) engendering the more efficient, technologically literate, data-led, evidence-based and innovative organisational practices needed to drive changes in tourism provision and improve the quality of the tourist experience in the NI region.
(I3) influencing the professional and pedagogical practices of educators in the classroom leading to an enrichment of the learner's experience.
(I4) developing the technological skills and knowledge of educators to enhance their curriculum and provide a wider range of educational opportunities in an innovatively designed learning environment.
(I5) supporting educators to be more resilient in responding to broader societal challenges such as the vexed issue of 'Shared Education' in a post-conflict society like Northern Ireland, or even unforeseen difficulties such as those thrown up by the current Covid crisis.*

*In the context of Northern Ireland, given its historical ethno-political divisions, the creation of a school system based on the principle of 'Shared Education' obviously carries a particular social and political significance in regional civic life. Shared education, as defined by the Department of Education in NI, means "the education together of (a) those of different religious belief, including reasonable numbers of both Protestant and Roman Catholic children or young persons; and (b) those who are experiencing socio-economic deprivation and those who are not, which is secured by the working together and co-operation of two or more…schools".

2. Underpinning research

Hickey, **Hook** and **Jackson's** underpinning research combines traditional academic scholarship (i.e., peer-reviewed journal articles) with related impactful civic activity and media practice outputs (i.e., augmented reality applications). It is important to understand that their academic scholarship and impactful activity *happen in tandem, forming a feedback loop of mutual imbrication and influence*. It would be too simplistic to say

that **Hickey**, **Hook** and **Jackson** conduct their underpinning research and use their findings to then drive or initiate impact beyond the academy. Rather, *it would be more precise to say that the impactful activity shapes their research findings as much as the findings drive the impact.*

Hook and Jackson's research shows how emerging technological forms, such as augmented reality applications, can help everyday users creatively negotiate locative experiences of various kinds. **(R1), (R2)**. For over ten years, **Jackson** has been at the forefront of showing how mobile location technologies are capable of providing intuitive and immersive forms of wayfinding, and her research work has directly driven change and innovation within the cultural and tourism sector in NI. Through her work with various collaborators, and through researching/producing the output, 'Seeing and knowing Titanic Belfast using augmented reality: an auto-ethnographic view', 2017 **(R1)**, **Jackson** became acutely aware of the potential phenomenological richness of mobile location technologies; how such emerging media forms can enhance tourism provision and the tourist experience. These key insights or findings drive **Jackson's** work in the cultural and tourism sector in NI and relate to impacts **(I1), (I2).**

Working with external educational providers as collaborative partners to prototype and develop new learning landscapes, **Hook, Hickey and Jackson's** AGENCY project has helped enhance the pedagogical experience of a number of learners in primary and post-primary educational contexts in NI. On the one hand, AGENCY represented an opportunity for **Hook, Hickey and Jackson** to translate their concepts of technologically augmented learning into practice. On the other hand, their concepts were also critically reflected back on them through their involvement in AGENCY. **Hook, Hickey and Jackson's** concepts or research insights – of 'learning landscapes', of the teaching space as a 'third teacher' creatively challenging the traditional dyadic pedagogical exchange between educator and educated – were experimented on by educators in the classroom, educators motivated to enhance the pedagogical experiences of learners in real-world settings. This relates to the impacts **(I3), (I4)**. In this way, their output, 'Where is my Googleplex? Rethinking vocational learning and teaching spaces for digital media curriculums', 2018 **(R3),** is both a product of, and a scholarly reflection on, their collaborative research work in various educational spaces.

Since 2016 **Hickey** has been critically refining his participatory action research project *Generation Animation*. This project improves access to educational opportunities by bringing school children, parents and teachers to UU campus and engaging them in contemporary active learning pedagogies using emerging media technologies. Through this project, **Hickey** insightfully explored and discovered the extent to which *Generation Animation* could play a role in: a) technologically upskilling teaching staff to enhance and transform their curriculum; b) enabling a more technologically literate teaching staff to respond to societal challenges such as the vexed issue of 'Shared Education' in a post-conflict society like NI, or even unforeseen difficulties like those thrown up by the Covid crisis. These research insights relate to the impacts **(I4), (I5)**. In this way, **Hickey's** output, '*Generation Animation*: *intergenerational media practice pedagogy through Participatory Action Research*', 2020 **(R4)**, is a both product of, and a scholarly reflection on, his research work in various educational spaces.

3. References to the research Outputs can be provided by Ulster University on request.

(R1) Jackson, H. (2017) 'Seeing and knowing Titanic Belfast using augmented reality: an auto-ethnographic view', *Journal of Media Practice and Education*, 18, 2, 154-170.

(R2) Hook, A. (2019) 'Invisible Belfast: flat ontologies and the remediation of the Post-Conflict City', *Convergence: The International Journal of Research into New Media*, Online first publication, (https://journals.sagepub.com/doi/abs/10.1177/1354856519896174). Co-authored with Danielle Barrios-O'Neill, Royal College of Art.

(R3) Hickey, A. Hook, A. Jackson, H. (2018) 'Where is my Googleplex? Rethinking vocational learning and teaching spaces for digital media curriculums', *Journal of Media Practice, and Education*, 20, 1, 29-43.

(R4) Hickey, A. (2020) 'Generation Animation: intergenerational media practice pedagogy through Participatory Action Research', *Journal of Media Practice and Education*, 21, 2, 109-120.

The above journal articles have been subject to blind peer review practice by internationally-based editorial boards.

4. Details of the impact

(I1) enhancing the knowledge, technological skills and/or professional practices of tourism providers in developing initiatives to facilitate growth across the regional tourist sector in NI.

Jackson's research work has directly driven change and innovation within the cultural and tourism sector in NI. The Museums Services Development Manager at Causeway Coast and Glens Borough Council (CCGBC) **(C6)** points out how the "*academic research and expertise*" of **Jackson** *"has led to significant impacts on CCGBC's development of a Heritage Lottery Funded project"* which aimed *"to develop initiatives that will encourage growth in specific sectors and enhance the area's tourism provisions"*. Keen *"to capitalise on the opportunities and novel approaches to destination tourism created by mobile phone technologies"*, CCGBC *"sought the expertise of Dr Helen Jackson"* and her involvement *"became critical in informing key project decisions required to resolve an innovative yet authentic technologically-mediated destination experience for the culturally-motivated tourist"*. For example, "*Jackson's recommendations defined the user journey..... as a technologically augmented 'virtual journey', enabling the project team to move away from previously considered physical contexts of discovery that had the potential to…infringe on physical integrity of tourism sites*". Further, engaging with **Jackson's** work allowed for "*the development of a mobile-app form of interpretation*" for the very first time, with the *"successful outcome and experience gained by the organisation"*, becoming *"integral to future cultural heritage strategies"*, thereby providing *"the opportunity for the…council to…consider new approaches to animating the Causeway Coastal Route"*.

The Sustainable Tourism Manager at the Mourne Heritage Trust (MHT), a key tourism stakeholder in the Newry and Mourne area **(C7),** similarly points to the significant impact of **Jackson's** research. Becoming increasingly aware of the transformation that emerging media technologies were having in "*framing the behaviours of the traveller*", the Trust was "*very keen to explore the opportunities provided by immersive technologies to give visitors tools for supporting a visitor experience of both tourist destinations and tourism attractions in the region*". MHT looked directly to "*Jackson's research into immersive technologies and her analysis of the current trends and strategies being deployed in relation to tourism-focused app experiences in trying to overcome the key challenges faced in providing a work plan that would deliver an immersive technology strategy for its organisation"*.

(I2) engendering the more efficient, technologically literate, data-led, evidence-based and innovative organisational practices needed to drive changes in tourism provision and improve the quality of the tourist experience in the NI region.

The Museums Services Development Manager at CCGBC **(C6)** importantly stresses how "*Jackson's influence was critical in establishing the need for analytical data to be embedded into the mobile app development. With this new knowledge…of analytical data, the Council was furnished…with the evidence needed to bring changes to the way in which heritage-led tourism…connects visitors to destination stories*". Further **(C6)** points out that "*as a result of Dr Jackson's recommendations on the planning, activities and allocation of resources for the project, Museum Services were able to deliver on an app that was not only innovative in the form of interpretation it provides, but also one that represents value for money"*.

In a similar vein, The Sustainable Tourism Manager at MHT **(C7)** emphasises how "*Dr Jackson's research brought a clearer and more realised awareness…of the potential of technologies involved in creating mobile app solutions"*, thereby facilitating *"a greater level of*

innovation…through the apps subsequently developed". Further, *"Dr **Jackson's** recommendations…reduced the Trust's anxiety over costs, informing "a robust tender process that minimised the risk in contracting appropriate resources required for the Trust's very first immersive technology-led strategy".* Finally, the collaboration with *"Dr **Jackson** directly led to capacity-building in the Trust in relation to developing mobile tourism apps"*, including *"new knowledge on how to unlock the innovative potential of mobile applications and improved connectivity with regional tech companies. Since this engagement with Dr **Jackson**, the Trust has created a number of app-based solutions that have enhanced the quality of the tourism experience in the Newry and Mourne area"*. **(C7)**

Further, the Head of Innovation Strategy at the Department for the Economy in Northern Ireland emphasizes the importance of **Jackson's** research to tourism provision all across the NI region. *"Dr **Jackson's** path-breaking work is a great example of one of the earliest SBRI* (Small Business Research Initiative) *projects in the NI tourism sector and her work has been instrumental in driving the change needed to improve tourism provision all across the NI region. This is particularly the case in proving out the SBRI approach to the procurement of innovation in mobile location technologies".* **(C8)**

(I3) influencing the professional and pedagogical practices of educators in the classroom leading to an enrichment of the learner's experience.

Hook, Hickey and Jackson's AGENCY project has helped enhance the pedagogical experience of a number of learners in various primary and post-primary educational contexts in NI. For example, the principal of Millstrand Integrated Primary School, Portrush **(C1)** praised them for their engagement with his teaching staff, emphasising the direct impact their work has had on the everyday life of the school. AGENCY, he pointed out, has clearly *"increased student engagement"* at the school, allowing teachers to rethink how they can centre their teaching better on *"the experience of the learner"*. *"The knowledge you were able to impart to us about the space as the 'third teacher' was also invaluable, your student-centred approach fits so well with our school ethos: we believe in every child"*. In a similar vein, the principal of North Coast Integrated College, Coleraine **(C2)**, emphasised the importance of AGENCY to the teaching practice of her staff and colleagues. She states: *"The teachers found it really valuable",* showing *"how we can make small changes that have large impacts on student wellbeing and their learning. Your discussions of the space being the 'third teacher' in a newly developed 'learning landscape' were really interesting and allowed the teachers to use emerging media and technology in exciting ways to increase engagement, classroom inclusion and the students understanding"*.

Hickey's *Generation Animation* project is a participatory action research-led engagement with children in some of the most deprived areas in the NI region. This project provides improved access to educational opportunities by bringing school children, parents and teachers on to UU campus and engaging them in contemporary active learning pedagogies using emerging media technologies. Commenting on the direct impacts of *Generation Animation*, the Principal of St Malachy's Primary School, Coleraine **(C3)** states that *"since participating in the Generation Animation project we have continued to use the skills the staff developed to incorporate animation as part of our ICT activities within the classroom"*. **Also (I4)**

(I4) developing the technological skills and knowledge of educators to enhance their curriculum and provide a wider range of educational opportunities in an innovatively designed learning environment.

Further, the Principal of St Malachy's Primary School, Coleraine **(C3)** emphasised how *Generation Animation* upskilled teaching staff through *"raised awareness of the potential and positive impact of using iPads to enhance the curriculum and provide a wider range of learning opportunities for pupils"*. **Also (I3)** Another concrete example of how the curriculum was directly enhanced was through *"animation becoming"*, as the St Malachy's principal **(C3)** puts it, *"an integral aspect of our school development plan and our school action plan"*. That is to say,

there is *"more consistent planning for and use of animation and other aspects of ICT across the curriculum; for instance, in various literacy activities which develop creativity and independence"*. **Also (I3)** Referring to the increased use of the school's website and social media at St Malachy's, the principal **(C3)** states that "*taking part in the Generation Animation project was the stimulus for all future developments to date in relation to ICT*". **Also (I3)**

In a similar vein, the principals of St Brigid's **(C4)** and Cloughmills **(C5)** Primary Schools spoke of the impact of *Generation Animation*, both emphasising that the project: a) *"enhanced the teacher's expertise in animation and gave them the confidence to integrate these new-found skills into their teaching"* and b) inspired *"the staff of both schools to explore and unlock the potential of iPad technology in the classroom. As a result of the project, teachers were now prepared to take a risk in relation to the delivery of ICT in the primary setting"*. **Also (I3)** Further, both school principals stated that *Generation Animation* precipitated the use of media technologies all *"across the curriculum in a variety of ways in order to motivate, engage and extend pupils' learning opportunities"*. In sum, then, in the principals' own words: *"The Generation Animation Programme has upskilled staff and enabled them to broaden the delivery of ICT in our respective schools across the curriculum"*. **Also (I3)**

(I5) supporting educators to be more resilient in responding to broader societal challenges such as the vexed issue of 'Shared Education' in a post-conflict society like Northern Ireland, or even unforeseen difficulties such as those thrown up by the current Covid crisis.

Against the backcloth of the vexed question of 'Shared Education' in NI, *Generation Animation* provided school children from different backgrounds with equal access to new forms of artistic expression through digital technologies and undergraduate mentoring, resulting in an enhancement of quality of life. **Hickey** worked directly with school management teams in two Primary schools in the Cloughmills area of the NI region: St Brigid's and Cloughmills. The principals of St Brigid's **(C4)** and Cloughmills **(C5)** both spoke positively and in unison about how housing *Generation Animation* in a university setting meant that it operated as a kind of *"third space"* in which children, from various ethno-political, socio-economic or cultural backgrounds, could come together to work on common projects. Both principals emphasised how the space "*enthused the pupils, removing any notion of favouritism towards any particular school. This…ensured that all families wanted to be part of the project, with full uptake from the pupils of both schools"*. Finally, speaking of the school's more recent challenges during the Covid-related lockdown of Spring 2020, the St Malachy's principal **(C3)** said that as a *"result of the Generation Animation project and subsequent action plans and additional training initiatives, our staff were in a position during our sudden lockdown to utilise ICT as a means of supporting our pupils and communicating with our parents*".

5. Sources to corroborate the impact

Testimonials From:
(C1) The Principal, Millstrand Primary School, Portrush, NI.
(C2) The Principal of North Coast Integrated College, Coleraine, NI.
(C3) The Principal, St Malachy's Primary School, Coleraine, NI.
(C4) The Principal, St Brigid's Primary School, Cloughmills, NI.
(C5) The Principal, Cloughmills, Primary School, Cloughmills, NI.
(C6) The Museums Services Development Manager, Causeway Coast and Glens Borough Council, NI.
(C7) The Sustainable Tourism Manager at the Mourne Heritage Trust, NI.
(C8) Head of Innovation Strategy at the Department for the Economy in Northern Ireland