

ERSA 2026 – Extended abstract

Theme line: *Universities and Regional Development, Skills, Training, and Lifelong Learning for Green and Digital Transitions*

Title: *More than a talent pipeline: Universities and the social microdynamics of the development of Video Games Clusters*

Extended abstract

The multiple roles higher education institutions play in the emergence, development, and growth of creative clusters have been explored in the regional studies literature. Authors highlight several paths of influence, including skills development, knowledge transfer, infrastructure provision, and networking facilitation (Comunian et al., 2015; Plum, & Hassink, 2014). Most of these studies analyse creative clusters from the perspective of Economic geography, Econometric modelling, and Management Studies while focusing on formal interactions among clearly defined organizations and the impact these may have on competitiveness and innovation on regional levels (Ozalp, 2024; De-Miguel-Molina et al., 2012; Belyaeva et al., 2022). However, these studies partially leave out of focus the informal daily microdynamics of social life connected to the complex sociocultural and historical components of these clusters. This constitutes a gap in the literature that may obscure other types of less formal interactions among educational organizations and creative clusters that could play a crucial role in their sustainment and expansion over time. Furthermore, the role of higher education institutions in the emergence, development, and growth of video games clusters in particular has been studied to a lesser extent (Keogh, 2023), even when video games clusters are rising in prominence for policymakers and private investors' interest equally. This is the case particularly for clusters that can be considered peripheral and that have emerged outside of dense metropolitan areas such as European capitals and major cities (Berlin, Hamburg, London, Madrid, Barcelona, Milano, Rome, Helsinki, etc.).

To contribute to these missing pieces in the regional studies literature, this ongoing research examines the case of Dundee's creative industry, a post-industrial peripheral city in Scotland that has developed a successful and stable cluster for video games within a growing creative industry sector, which has a higher education institution in the form of Abertay University as one of its main pillars. Dundee's video games cluster, one of the UK's most historically significant hubs, is characterized by being one of the most stable and successful in Northern Europe, home to both large AAA studios such as Rockstar and 4J, as well as independent collectives and numerous medium-sized companies. By focusing on the complex microdynamics of this video games cluster, particularly on Abertay's multiple two-way influence on the cluster, this study contributes to the literature by examining how higher education institutions contribute to the emergence and transformations of video games clusters in particular, while also enriching the knowledge concerning the multiple ways in which these organization contribute to the operation and growth of creative clusters as a whole.

The study is part of a wider study of 6 video game clusters across Europe, the GAME-ER project¹, and it is based on a multisource approach, implemented since 2024 and still ongoing. The analysis draws on 45 semi-structured interviews, participant observation at industry events, and archival research spanning six local historical collections. Interviewees included studio founders, developers, educators, policymakers, students from video game-focused degrees, policy actors, and members of creative collectives. These sources are complemented by document analysis of policy reports and industry data. In addition, local archives were visited to grasp the historical trajectory of the cluster, and the team

¹ <https://www.game-er.eu/>

participated in educational and game industry formal and informal events to understand the complex sociocultural dynamics at play.

The contemporary and historical evidence gathered for this project (De Paoli et al., 2025) points to the key role Abertay University has played across time in the emergence, consolidation, and expansion of the Dundee video games cluster. This role has taken a multiplicity of both formal and informal interactions, both shaping the local industry as well as being shaped by it. This symbiosis between academia and industry has fostered a relatively cohesive community, characterised by intertwined personal and professional networks. The focus is set on understanding the different roles Universities may play in a creative cluster over time, across different stages of maturity, and across critical periods. In the case of Dundee, we draw on 40 years of interactions that include but also go beyond the institutionalization of video games education.

It is worth noting that Abertay University launched the world's first degree in Computer Games Technology (1997), inspired in part by the needs and influence of the local rising video games industry, and would heavily influence how video games education was designed and taught across the globe (Sutherland, 2017). Locally, this close relationship between the game companies and Abertay created a pathway feeding directly into the local game companies, and training students who would also be interested in creating their own companies. But the role of the University goes beyond training talent, as one interviewee describes, *"A lot of the video games companies in Dundee are essentially connected to Abertay— if you look at Abertay as like a deep-sea vent, the games industry is like the bacteria that surrounds that... It's an ecosystem"* (Senior Game Developer). The close relationship between Abertay and the industry is further highlighted by the fact that many smaller studios were either founded by people who have been part of Abertay or employ a lot of people who've studied there.

Furthermore, across time, initiatives aimed at supporting new ventures, signposting, and fostering collaboration play a key role. Paul Durrant at Abertay established a graduate enterprise incubator called Embryonix in 2000, which attracted student and graduate teams looking to start games businesses. As one of our interviewees who worked in this initiative mentioned, *"quite early in that, we began to attract interest from some of the student and graduate teams who were beginning to think about setting up games businesses"* (Senior Lecturer). This incubator helped the rise of early companies like Digital Goldfish, which was later acquired by Ninja Kiwi. Projects like Dare to be Digital (later transformed into DARE Academy), a competition showcasing student game development talent along with expert mentoring, also facilitated connections between aspiring developers and the established industry. Abertay's anchor role reverberates in a cooperative and open games community that is open to communities from other creative industries: *"I think I really like that Dundee feels like creative networks are quite connected— they have good relationships, and they're quite close, in a way that is not the same in other places."* (Independent Game Developer and Designer)

Overall, the study identifies 7 roles, in addition to the ones already mentioned in the literature, through which Universities interact with and shape creative clusters: becoming a social anchor for the cluster in times of change and crisis; absorbing the expertise of game developers and translating it into curricular design and teaching; diversifying professional pathways for game developers who are already working in the industry; becoming a mnemonic repository for the whole cluster across time; promoting the development of cooperative and collaborative links among different stakeholders in the cluster; providing a more balanced critical outlook on the industry for potential graduates; and integrating industry partners into research projects with national and international dimensions.

For example, in the last 15 years, several Abertay graduates have formed, in connection with other independent developers and lecturers from the University, several successful Collectives that operate

in a collaborative and community-enhancing manner. These organizations, such as *Biome Collective* or *Very Evil Demons*, reimagine labour through cooperative models and experimental practices, often prioritizing cultural engagement over commercial imperatives. Another example is that of research and innovation projects led by Abertay, in which industry actors get involved in knowledge production and innovation across technical and social domains. Namely, projects such as *InGAME* and *Co-STAR* now mediate collaboration between academia, industry, and civic actors, reinforcing Dundee's identity as a site of innovation.

To conclude, the Dundee cluster provides a rich case for examining the interaction of universities and creative industry clusters because of its long trajectory, the multiple industrial transformations it has gone through, and the key role Abertay University has played in nurturing and being shaped by the cluster in significant ways.

References

Belyaeva, Z., Petrosyan, A., & Shams, S. R. (2022). Stakeholder data analysis in the video gaming industry: implications for regional development. *EuroMed Journal of Business*, 17(3), 333-349.

Comunian, R., Gilmore, A., & Jacobi, S. (2015). Higher education and the creative economy: Creative graduates, knowledge transfer and regional impact debates. *Geography Compass*, 9(7), 371-383.

De Paoli, S., Leça, L., Moreira, T., Švelch, J., Fassone, R., Costalunga, N., & Fousek Krobova, T. (2025). D4.1 - Report on Primary Data Collection. GAME-ER. <https://doi.org/10.5281/zenodo.17535331>

De-Miguel-Molina, B., Hervás-Oliver, J. L., Boix, R., & De-Miguel-Molina, M. (2012). The importance of creative industry agglomerations in explaining the wealth of European Regions. *European Planning Studies*, 8, 1263–1280. <https://doi.org/10.1080/09654313.2012.680579>

Gong, H., & Binz, C. (2023). Cumulative causation in regional industrial path development—A conceptual framework and case study in the videogame industry of Hamburg and Shanghai. *Geoforum*, 141, 103729.

Keogh, B. (2023). *The videogame industry does not exist: Why we should think beyond commercial game production*. MIT Press.

Ozalp, H. (2024). Heterogeneous development paths to growth and innovation: The evolution of the video game industry across four hubs. *World Intellectual Property Organization (WIPO) Economic Research Working Paper Series*, (84).

Plum, O., & Hassink, R. (2014). Knowledge bases, innovativeness and competitiveness in creative industries: the case of Hamburg's video game developers. *Regional Studies, Regional Science*, 1(1), 248-268.

Sutherland, J. (2018). 20 Years of Computer Games Degree Programs: From Abertay in 1997 to York in 2017. *The Computer Games Journal*, 7(3), 149-152.