

Chapter 7

Conclusions: Cross-innovations between Audiovisual and Education Sectors

Indrek Ibrus and Mervi Rajahonka

Abstract

The chapter concludes the section on cross-innovation and convergence processes between audiovisual media industries and the education sector. It addresses, first, that these processes are not driven by any specific technology, but by two broad and interdependent processes – individualisation that makes people in insecure careers search for personalised learning opportunities and the experience economy that produces expectations for learning experiences to be pleasurable and fun, that is, gamified. The chapter demonstrates the emergence of EdTech as a new dialogic subsector operating between the publicly operating education sector and the private media and information and communication technology industries. It demonstrates the inherent institutional diversity in and around this subsector and discusses the nature of the dialogues constituting it. It, lastly, addresses the risks deriving from global platformisation to the education sector and demonstrates how Estonia’s government-run platforms, effectively cross-innovation systems linking teachers, learners and content providers in dynamic ways, could present feasible alternatives to the global platforms.

Keywords: Mediatisation of education; platformisation of education; EdTech; cross-innovation; education innovation; learning gamification

Mediatisation

What was, perhaps, most salient in the last three chapters was that education is, indeed, mediatising intensely. It is mediatising as it is gamified and getting ready



© 2019, Indrek Ibrus and Mervi Rajahonka. Published by Emerald Publishing Limited. This chapter is published under the Creative Commons Attribution (CC BY 4.0) licence. Anyone may reproduce, distribute, translate and create derivative works of this chapter (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this licence may be seen at <http://creativecommons.org/licences/by/4.0/legalcode>

for platformisation. What we learned is that some of the social forces described in Chapter 1 are at immediate play in the education sector. New learning applications and digital audiovisual (AV) forms of content are emerging as the broader individualisation process is shaping our learning patterns and making us seek unique experiences in learning – not only because these forms are more entertaining, but also because they may be more effective and because they are dynamically changing society and culture and the associated neoliberal fears make us constantly seek new knowledge and skills.

But there are, of course, important distinctions in how education is mediatizing. In Schulz's (2004) forms of mediatization, the concern is not what he called *extension* – when the form of media is used to extend, complement or enrich the experience of learning, such as when an educational film is shown in a classroom. What is in question are the justifications for *substitution* – for instance when, in Chapter 5, the Swedish policy makers discussed substituting their lacking teachers with artificial intelligence (AI) based learning assistants. Or what does it mean when mediatization takes the form of *amalgamation* – when media use is woven into existing social practices in ways such that the media's definition of reality merges with the realities of that practice, creating an entirely new amalgamation. An example of this is when well-known videogames are used for teaching various school curricula, as with the School at Play¹ initiative in Denmark. Film, TV and videogame industries are contributing to all these forms of mediatization and can make a business out of them. That cooperation could be beneficial to all parties. Yet, paradoxically, it is Schultz's last form – *accommodation* – that presents a challenge for the education sector. By 'accommodation', Schultz is referring to situations when media itself becomes an influential economic and social actor – such that other sectors need to transact with and, therefore, accommodate it. For the contemporary education sector, such accommodation means *platformisation* with all its accompanying risks. We will come back to this at the end of the chapter.

Diverse System

Our sub-studies where we looked at how screen industries are co-innovating with the health care (see Chapter 9) and tourism sectors (see Chapter 13) suggested that, to an extent, it has been the arrival of new technologies that has motivated the new waves of cross-innovation to emerge. In tourism, it is augmented reality (AR) that has enabled experiences to be augmented in new ways. In health care, virtual reality (VR) has motivated experiments with regard to various forms of preventive care and rehabilitation. In the case of education, we did not identify any specific new media technology that could be argued to have motivated a specific cluster of innovations to emerge at the time of our study. Instead, in education we realised that a whole range of technologies is employed, from more traditional computers and tablets to newer technologies – AR, VR,

¹See further: <http://www.schoolatplay.dk/>

AI and so on. A prevailing technique, however, that could be understood to have motivated inter-sector engagement is *gamification*. To emphasise, the system is diverse in the technologies and material forms used. Yet, instead of technologies, the main motivators for innovations are still, first, collectively shared recognition of the importance of learning and, second, the also widely sensed urgency of learning, the understanding that learning needs to happen anytime/anywhere and that it needs to be effective, that there is no time to waste. Such perceptions can be understood as resulting from broader individualisation, and also from the general fear of losing out in the ongoing social flux and in the automation of everything that is understood as threatening all careers and professions. Such fears result often, first, in the instrumentalisation and, then, the commodification of education.

Yet, as Chapter 5 focused mainly on formal education, it needs to be stressed that in this context other, perhaps more immediate forces hold sway. As for instance when both of our case-countries – Sweden and Finland – were seeing an opportunity to start exporting their successful educational model abroad. This could be seen as a way to satisfy the demand described above, for which, again, mediated solutions may be appropriate. Connected to this, both countries were at the time becoming more open towards private sector interventions into formal education systems and, relatedly, of course the entrepreneurial activities were another notable force leading towards market-driven innovations and cross-innovation therein.

What the latter aspects also indicate is the very high institutional diversity in the education sector. In Northern Europe, it consists mostly of schools as public institutions, but also of private partners that service the sector in various ways. Regarding educational content, perhaps the most influential have been textbook publishers, usually dominated in each market by a handful of very large publishing houses. But next to schools and their private partners are, of course, a variety of interest groups and political governing bodies – parents bodies, alumni organisations, governments and so on. This means that the educational systems are, in effect, very diverse in terms of their institutional setups and heterogeneous in terms of the rationales that drive them. If we think back to what was argued in Chapter 2, diversity in institutions and in their rationales and objectives tends to be generally good for the health of innovation systems. Let us look next at what we learned about the exchanges between these very different institutions and their effects on innovation processes.

Dialogues

We learned, first, that dialogues are hard, often because the broader system includes sub-systems that enjoy their autonomy, where path-dependencies are strong and there are systemic auto-communication processes, too. For instance, we learned that the entertainment-oriented videogaming industry (the sheer majority of it) is generally not interested in working with public partners. This is simply because its usual business-to-customers (B2C) markets are comparatively

much more free of bureaucratic hassle and related uncertainties. This constitutes the first threshold for inter-sector dialogues. We also learned that established textbook publishers, although they are gradually digitising their properties and offerings, generally tread carefully so as not to cannibalise their lucrative textbook business. This also slows dialogues.

However, it is not unexpected that incumbent firms and industries are careful about undermining their bottom line. Similarly, it is also not surprising, as we saw in Chapter 5, that start-up companies are more willing to experiment with industry boundaries and learn across those. In Sweden and Finland, there are plenty of cross-sector networking measures in place, designed to facilitate these efforts. While the number of measures may be even confusing to start-up companies, many of them are gaining from their existence, as also seen in the MoleQL example in Chapter 6. Young people and their micro-sized companies are looking up these opportunities and seeking new expertise as they do not have much in-house. Such networking and cooperations is easier in Scandinavian countries with their decades-old dialogical and consensual cultures and high trust levels. Yet, Chapter 5 also revealed slight differences between their cross-innovation facilitation policies. In Sweden, these build more on the triple-helix model where universities have a central role – as in the case of Malmö where the local university serves as a knowledge and experimentation hub around which both media and EdTech sector companies cluster. In Finland, again, company-to-company type interactive learning processes (in Lundvall’s sense) and related forms of clustering are more salient, although there are also hubs/accelerators organised by universities, such as xEdu, which operates at Helsinki University Campus, as well as living lab-type experiments that also include users, such as Kyky in Espoo.

Yet, what emerged in both cases was the need for a certain ‘translation function’. As for videogaming and media content companies, the complex public nature of the education sector continues to be a challenge. It is understood that a new breed of niche companies is needed – consultancies or expert game or content design companies, also public agencies and umbrella organisations that intermediate between both sectors – to translate the needs and peculiarities of one to the other and establish linking nodes in cross-industry value-chains. This niche, a new industry mostly consisting of an army of start-up companies, has been long in development and it is popularly known as the *EdTech* industry.

EdTech Emergence

Our interviews with insiders in both sectors – AV media including videogames and education – suggested that EdTech is a well-defined example of a dialogic and translatory boundary industry between two worlds. The industrial cultures and competence areas of these worlds are quite different. While the potentials of working together are apparent, they are difficult to achieve owing to lack of resources (monetary and time) on both sides, different expectations for business conduct and different professional identities, social dynamics, values and

'languages'. As a result, the EdTech industry that has been emerging is one that is inherently very heterogeneous. One aspect here is that, in terms of broad professional identities, it includes not only education and technology, as the name suggests, but also creative and media professions – the makers of content, the designers of games, the writers of narratives and those shooting the pictures.

But we also learned that there is a plurality of ways in which people have tried to put digital media and technologies in the service of learning. As one Swedish interviewee, an educational policy maker, put it in Chapter 5, there was the time of the 'app-fest', but now, this period is over and the search is on for more informed, systematic and transmedial ways of integrating media into formal education – solutions based on evidence and lessons from previous attempts. In terms of Schulz's (2004) forms of mediatisation, these new ways could be understood as *amalgamation* – where media is woven into existing social practices in ways that merge the media's definition of reality with the realities of that practice. One needs to recognise in this context that EdTech has a variety of subfields – autonomous apps for acquiring specific skills or knowledge; solutions supporting specific activities in classrooms associated with specific curricula; solutions for communication between learners and teachers; solutions for monitoring learning processes and so on. The variety in terms of forms and functions is very big. All together they form a complex new amalgamation of mediatised education.

This new amalgamation as a dynamic constellation of technologies and representative forms has an equally complex set of producers. Yet, as already suggested earlier, despite the heterogeneity, they have gradually formed a specific auto-communicatively funding whole – the EdTech industry. Perhaps, this is more visible in small countries with clusters such as the one in Malmö, Sweden (and in the broader Skåne region) where it is systematically facilitated by local policy makers and their at-arm's-reach organisations (specifically the Malmö Media Evolution City, a cluster organisation).

The more integral educational media solutions that have emerged post 'app-fest' seem to be based on the perception that the public sector needs to regain a driving role in commissioning solutions. This perception is based on the view that education is, in effect, a common good central to the advancement of societies and that educational media and technologies need to support this function. In this context, further commodification and privatisation of educational services by those just happening to gain access to them as a market presents a risk. Furthermore, that the 'app-fest' could be over may also suggest that EdTech is graduating from the typical early fluid phase of any innovation in terms of Tidd and Bessant (2009). Or, as Perez (2003) suggests that it is leaving the so-called installation phase. This is the initial phase when entrepreneurs and financiers call the shots because they are the ones investing in new technologies that have barely emerged and that very few people understand at the time. However, according to Perez, this is followed by the 'deployment phase', in which a society starts realising it is being shaped by a new paradigm. At this stage, governments take charge and build institutions that can render new ways of living more sustainably and inclusively. It is difficult to assess, based on our Swedish and

Finnish case studies, whether these countries are arriving at the deployment stage, yet. The question is critical, however, owing to the risks deriving from platformisation that were also discussed in Chapter 5.

Platformisation

The platformisation of education has been extensively discussed in a recent book by van Dijck, Poell, and de Waal (2018, pp. 117–136). They demonstrate how the platformisation and more specifically the datafication of education has facilitated forms of teaching and learning that may undermine the status of education as a public good as well as weaken educational systems oriented towards facilitating equal opportunities and upward mobilities. The personalisation of education, that individual learning processes, their success and effectiveness are analysed and shaped accordingly may, in effect, result in forms of educational ‘filter bubbles’. It may also result in what van Dijck et al. (2018, p. 124) have called ‘learnification’ – in learning processes divided into short-term personal missions focused on acquiring specific skills and not in facilitating education as *Bildung* – in bringing up enlightened and self-reflective citizens able to creatively synthesise multiple bodies of knowledge and arrive at judgements in complex and dynamically changing environments. Furthermore, as recent studies (Beetham & Sharpe, 2013) have demonstrated, there is in fact no clear evidence that datafied forms of online learning will significantly improve the academic outcomes of the majority of students over the long term. Also, the UK government has questioned in a report whether datafied and personalised education can be assumed to improve trust and public confidence in contemporary societies.²

To conclude, platformisation could present a variety of risks to societies and their educational systems. Yet, this book is about cross-innovation systems in rather small countries – and in this context, we need to highlight that platformisation may present itself in rather different ways in different countries. For instance, while van Dijck et al. (2018, p. 117) are arguing that most online educational platforms are corporately owned, this is not the case in small countries such as Estonia – a country and a distinct culture too small to interest the global online giants. Instead, its government has invested notable funds in providing its junior citizens with a wide range of open learning materials and open, government-run platforms³ to host this content as well as any other content produced by different parties; for example, *e-koolikott* (e-schoolbag in translation) is in effect a platform for educational content-related *social network markets* (Potts, Cunningham, Hartley, & Ormerod, 2008). It is an environment where solutions and offerings, both free and not, can accumulate; where free content can be reused, modified and remixed, and where incremental improvements can

²See further https://www.policyconnect.org.uk/hec/sites/site_hec/files/report/419/fiel-dreportdownload/frombrickstoclicks-hecreportforweb.pdf

³See further <https://www.opiq.ee/>; <https://e-koolikott.ee>

gradually amass and the best solutions get highlighted and receive wider adoption. These processes are coordinated by a network of students, teachers, EdTech professionals, educational content creators and so on – all connected by a government-created platform. That is, the government contributes here as a facilitator and coordinator of a cross-innovation system.

The existence of such a platform does not fully eliminate the possibilities of large international platforms eventually reaching Estonia or other small countries around the Baltic Sea and elsewhere, but it does reduce the potential negative effects predicted by Lundvall (2010), who considers that multinationals rarely contribute positively to national/local innovation systems. Instead, they tend to directly undermine these systems, especially by discouraging local effort – as we saw in Chapter 6 where the founders of the start-up MoleQL were afraid of the looming competition from large international players. A healthy, locally relevant innovation system consists of a diverse set of public and private players and creates opportunities for interactive learning among them, as well as resulting in the emergence of locally relevant novelties – for instance, learning materials well adapted to specific cultures. That is, platformisation, if executed locally and with a focus on public value generation, can facilitate innovation systems that advance education systems as public goods. In relation to Schulz's (2004) theory of mediatisation, privately held international platforms become threats to education when they take the form of *accommodation* – where the platforms themselves become influential economic and social actors that other sectors need to transact with and accommodate. This is not only because they promote 'learnification' and undermine privacy, but also because they risk undermining local 'interactive learning', in Lundvall's term – the effective functioning of education-related cross-innovation systems born to generate the most apt forms for local learning.

References

- Beetham, H., & Sharpe, R. (Eds.). (2013). *Rethinking pedagogy for a digital age: Designing for 21st century learning*. New York, NY: Routledge.
- Lundvall, B. Å. (2010). User-producer relationships, national systems of innovation and internationalisation. In B. Å. Lundvall (Ed.), *National systems of innovation: Toward a theory of innovation and interactive learning*. London: Anthem Press.
- Perez, C. (2003). *Technological revolutions and financial capital: The dynamics of bubbles and golden ages*. Cheltenham: Edward Elgar.
- Potts, J., Cunningham, S., Hartley, J., & Ormerod, P. (2008). Social network markets: A new definition of the creative industries. *Journal of Cultural Economy*, 32, 167–185.
- Schulz, W. (2004). Reconstructing mediatisation as an analytical concept. *European Journal of Communication*, 1(19), 87–101.
- Tidd, J., & Bessant, J. (2009). *Managing innovation: Integrating technological, market and organizational change*. Chichester: John Wiley & Sons.
- van Dijck, J., Poell, T., & de Waal, M. (2018). *The platform society: Public values in a connective world*. New York, NY: Oxford University Press.