

From Black Diamonds to Blank Screens – The Collapse of Sustained Attention and the Transactionalisation of Higher Education

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Abstract

This treatise examines the systemic and structural collapse of cognitive engagement within contemporary global higher education, utilizing a series of empirical pedagogical experiments as analytical entry points. Initiated by the failure of a classical, multi-layered historical screening (Black Diamonds) to anchor the focus of an international Master of Arts cohort in regional and environmental economics, the study expands into a critical institutional analysis. It details the deployment and subsequent administrative marginalization of pioneering 3D avatar-based and interactive Virtual Reality (VR) frameworks designed by the author between 2013 and 2026.

The paper argues that the widespread disinterest observed in modern lecture halls is not a localized methodological failure, but rather a neurobiological and sociological mutation driven by the high-frequency variable reward structures of the platform economy (e.g., TikTok, Instagram). This algorithmic conditioning enforces a process of cognitive extraction, stripping generations Z and Alpha of the capacity for sustained, linear attention. Consequently, the traditional humanistic and deep structural transmission of knowledge is systematically replaced by instrumental credentialism, wherein the university operates primarily as a transactional processing factory for degrees, visas, and geographic mobility pathways.

Furthermore, the study isolates the internal friction within the academy – namely faculty resistance to continuous professional development and the passive-aggressive gatekeeping of institutional IT departments – which actively strangulates technological modernization from within. Finally, the paper warns that by abdicating core knowledge transmission in favour of mere interface-handling skill development, higher education is producing an ultra-fragile "impulse civilization." This user-based cohort remains highly proficient in automated software navigation, yet critically defenceless and functionally illiterate against the raw physical, economic, and structural crises of the material world.

1. Black Diamonds, Empty Rows – The Collapse of Sustained Attention in the Global Classroom

On a spring evening in March 2026, a chance encounter with a television broadcast brought a long-forgotten cinematic experience back into my focus: the classic Hungarian historical feature film *Black Diamonds* (*Fekete gyémántok*). Set against the turbulent backdrop of nascent nineteenth-century capitalism, railway expansion, and the volatile birth of the stock exchange, the narrative offers far more than a mere romantic period drama. Viewed through the lens of a seventy-two-year-old professor of economics and geography, the film transformed into a vivid, multi-layered textbook on the human and environmental costs of industrial progress.

At the Budapest campus of John von Neumann University, I direct a Master of Arts (MA) program in Regional and Environmental Economics, currently comprised of twenty-five graduate students hailing from various regions across Southeast and Central Asia, as well as Africa. To me, Jókai's masterwork² appeared to be an ideal, unorthodox pedagogical tool. The film bril-

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² Maurus Jókai (Jókai Mór, 1825–1904) was a towering figure of nineteenth-century European literature and the most celebrated novelist of the Hungarian romantic era. Often compared to Charles Dickens or Victor Hugo for his vast panoramic style and profound social critique, his prolific oeuvre captured the industrial, political, and cul-

liantly manifests the concept of negative environmental externalities through the exploitation of natural resources (specifically coal mining) and the expansion of heavy infrastructure. Concurrently, it offers an intricate cultural tapestry – blending traditional folk music, rural lifestyles, and the high-society salon culture of nineteenth-century Europe – making it a perfect case study for my course on Value-based Identity Management.

Driven by what I now recognize as a profound pedagogical naivety, I coordinated with the Hungarian National Film Archive to secure a digitized copy of the two-part film equipped with English subtitles. I designed the lecture around this screening, distributing analytical worksheets to the international cohort. The objective was clear and academically rigorous: students were instructed to observe the historical conflicts arising from resource extraction and economic externalities, and to identify corresponding structural parallels within the contemporary developmental histories of their own home countries.

The outcome, however, was a sobering revelation. Despite the lavish costume design, the high-stakes financial intrigue, and the superb performances of the cast, the narrative completely failed to anchor the students' cognitive attention. By the intermission between the first and second parts, three-quarters of the international cohort had quietly evaporated from the lecture hall. By the time the final credits rolled, only three out of the twenty-five students remained in their seats – and those three did so strictly because their end-of-term marks were contractually tethered to the assignment. The rest had vanished into the digital ether.

This localized classroom failure is not a mere anecdotal disappointment; it serves as a critical empirical micro-study. It marks the precise boundary where traditional, depth-oriented humanistic pedagogy collides with the fragmented reality of the modern global student. It is the catalyst for this treatise – a necessary dissection of why the contemporary university classroom is facing a systemic and seemingly irreversible collapse of engagement.



Figure 1. The Diminishing Returns of the "Black Diamonds": Stills from the romantic-historical movie "Fekete gyémántok" (Directed by Zoltán Várkonyi, 1976). The imagery contextualizes the historical coal mining legacy, stock market speculation, and cultural traditions that underpin the socio-economic evolution of the study area.

tural transformation of Central Europe during the rise of the Austro-Hungarian Dual Monarchy. **Black Diamonds** (*Fekete gyémántok*, 1870) remains one of his most significant works, masterfully intertwining financial intrigue, early technological development, and socio-environmental externalities.

2. Institutional Avatar Experiments – Technocratic Pioneers and Bureaucratic Inertia

To misinterpret the pedagogical failure of the Black Diamonds screening as the stubborn disillusionment of a Luddite³ academic would be a fundamental error. The critique presented in this treatise does not stem from an aversion to technological progress, but rather from a career spent on the absolute bleeding edge of educational and administrative innovation. Long before the global tech hegemony commodified the concept of the "Metaverse"⁴, my research and development teams were actively deploying operational virtual environments designed to revolutionize both public administration and higher education. The collapse of student engagement is not a failure of method; it is the final symptom of a deeper systemic decay that defeated even the most sophisticated digital interventions. Dalgarno & Lee (2010) have already explored the potential learning benefits of three-dimensional (3-D) virtual learning environments (VLEs). They contended that the continued development of and investment in 3-D games, simulations and virtual worlds for educational purposes should be considered contingent on further investigation into the precise relationships between the unique characteristics of 3-D VLEs and their potential learning benefits. William Sims Bainbridge (2010) explored how persistent, computer-generated environments – such as MMORPGs⁵ (like *World of Warcraft*) and collaborative platforms (like *Second Life*) – impact human society, behaviour, and computer science.

The conceptual framework for these interventions was laid out in my early international publications, notably *Virtual Reality and Public Administration* (Tózsá, 2013) and *The Architecture of 3D Administration* (Tózsá, 2014). These theoretical architectures found practical, institutional form in 2017 at the Institute of Public Administration Studies within the National University of Public Service (NKE). Under my direction, an external software development firm successfully synthesized a functional, real-time 3D virtual campus. Within this system, both instructors and students could construct personalized digital avatars – customized by gender, hairstyle, and attire – and enter a highly detailed, two-dimensional digital replication of the actual university environment (Tózsá, 2017).

The software was architected for radical spatial and dialogic fluidity. Avatars could navigate in all directions through meticulously mapped institutional spaces, including the ceremonial hall, lecture rooms, corridors, the university's frontal plaza, the inner courtyard, the campus chapel, and the museum. Users co-present in the system could see, hear, and instantly engage one another through synchronized oral and textual dialogues. Professors delivered live lectures within these digital halls, and students retained the capability to download presentation materials directly onto their local hardware.

The evolutionary roadmap for this project was ambitious: subsequent iterations aimed to integrate procedural simulations tailored to the university's specialized faculties, such as equestrian training in the university stables, weapons assembly for military science students, and helicopter flight simulation. Furthermore, plans were in place to transition from static avatar presets to dynamic vector rendering based on users' actual photographs, alongside a transition from desk-

³ Luddite: Originating from the 19th-century English labour movement whose members destroyed industrial machinery out of fear of displacement, the term has evolved in modern academic discourse to describe technophobic or highly sceptical educators. In this context, it refers to individuals who rigidly reject the integration of digital and pedagogical innovations (like VR or AI) into higher education based on dogmatic or traditionalist principles.

⁴ Metaverse: an immersive, shared digital space where people interact as 3D avatars. Often described as the next evolution of the internet, it combines the physical world with virtual reality (VR) and augmented reality (AR) to let users socialize, work, and play in interconnected digital environments

⁵ MMORPG: Massively Multiplayer Online Role-Playing Game

top architecture to mobile application frameworks – a necessity later highlighted by pilot cohorts (Tózsza & Komlódi, 2026).

Yet, the system was ultimately strangled not by its technical limitations, but by severe internal institutional sabotage and administrative gatekeeping. The university's internal IT department viewed an outsider geographer's digital hegemony with undisguised professional jealousy. They deliberately withheld cooperation, refusing to facilitate the external developers' passage through the university's institutional firewalls. This manufactured obstruction resulted in systemic software delays; the university administration subsequently penalized the external developers with liquidated damages, creating a hostile, gridlocked operational environment that required my constant, exhausting personal mediation. Furthermore, the faculty within my own institute displayed a profound lack of enthusiasm, dismissing the paradigm shift as an eccentric, non-essential novelty rather than an administrative revolution.

This academic resistance was the structural sequel to an earlier, equally cautionary tale from my work in municipal M-Government content development, sponsored by Pannon GSM. We had previously implemented a fully functional 3D Document Office for the Municipality of Budaörs, allowing citizens to conduct real-time, virtual administrative transactions. While the director of the local registry office was an exemplary partner, the project was politically assassinated immediately following its press debut. The ruling political faction accused me of ideological subversion, questioning my political alignment simply because Budaörs possessed a liberal municipal leadership – ignoring the purely geographic reality that the project was located there solely because Pannon GSM's corporate headquarters were situated in Budaörs at the time.

When the NKE avatar system was finally piloted in a university seminar, the feedback from the student cohort was overwhelmingly positive regarding its interactive capabilities, though they critically noted the lack of a mobile application interface. The experiment proved that the technology was viable, but the matrix of institutional inertia, professional jealousy, and political paranoia ultimately ensured its marginalization. The academy chose to retreat into the comfort of its traditional gowned isolation, leaving these pioneering digital structures to gather dust as unadopted anomalies.



Figure 2. The Virtual Classroom: spatial navigation, avatar-based synchronous interaction and immerse campus simulation at the National University of Public Service (Tózsza, 2019)

For a visual demonstration, the 3D VR customer service system at the Budaörs Document Office is available online (https://indavideo.hu/video/Budaors_Project); alongside an immersive 3D VR university educational environment at the National University of Public Service (https://www.youtube.com/watch?v=ICu_5xtFz-k). These cases illustrate practical applications of the technology.

Structural conflicts between educational innovations, university bureaucracy, and IT gatekeepers pose significant obstacles to the implementation of connectivism (Bell, 2011). A fundamental tension persists between innovative pedagogical methodologies – characterized by agility and flexibility – and institutional stability entrenched in traditional hierarchical structures. Furthermore, sluggish decision-making processes, administrative barriers, overregulation, and risk-averse leadership severely impede the rapid adoption of innovations, such as emergent learning paradigms and digital transformation initiatives. Consequently, as evidenced by the aforementioned examples, IT departments and decision-makers striving for security, data privacy, and the integration of legacy systems frequently generate operational bottlenecks – whether intentionally or inadvertently – thereby obstructing the deployment of novel, externally developed educational technologies and constraining instructional creativity through excessive regulation.

However, according to field research, like that of Hind Rasheed Alqirnas (2020) students have positive perceptions of using virtual classrooms as an alternative to real classes. According to the findings, perceived usefulness is seen as a significant factor than perceived ease of use, which positively influences students' attitude toward the use of virtual classrooms that leads to intention to use it in the future.

3. The VR Green Operations Initiative – Immersive Skill Acquisition at the Zenith of Educational Technology

The logical evolution of my digital pedagogical interventions culminated in 2021 at the John von Neumann University, within the framework of the Economic Geography and Urban Marketing Center. Recognizing that traditional curriculum models in economics notoriously lack opportunities for industrial field experience, my team, in collaboration with external software engineers, developed a series of fully interactive, bilingual (English and Hungarian) Virtual Reality (VR) modules deployed via Meta Quest hardware. The core philosophy was to transform the abstract, often dry concepts of environmental economics into concrete, spatial, and tactile experiences – effectively bridging the gap between theoretical macroeconomic externalities and the micro-level realities of industrial operations.

The introductory modules of this immersive framework were designed as historical and scientific homages, anchoring the students' technological experience in elite scientific traditions. In the first simulation, students find themselves co-present with John von Neumann himself within a room-sized replication of the earliest computing architectures. To progress, the student must solve a logical puzzle requiring the physical extraction and replacement of three vacuum tube panels, subsequently initiating a test print. A parallel module immerses the student to the historic Jet Propulsion Laboratory at Caltech, where, under the virtual guidance of Theodore von Kármán, they manually configure and ignite the first prototype jet engine.

Beyond these historical narrative simulations, the core pedagogical engine consists of full-length, subject-specific operational tours. The flagship application details a comprehensive, thirty-minute walkthrough of a state-of-the-art, eco-friendly winery. Guided by a bilingual avatar, students are introduced to each chronological phase of production. Following each expla-

nation, the system demands manual interactivity: the user must calibrate machinery, adjust industrial settings, and pass localized micro-assessments to demonstrate a functional comprehension of the green workflow. (In a testament to the unpredictable nuances of globalized higher education, this module inadvertently introduced a minor cultural dissonance, as I temporarily overlooked the fact that the vast majority of our current international cohort consists of practicing Muslim students for whom viticulture carries a distinct theological inertia.)

The strategic vision behind this VR framework was a structured, semester-long curriculum comprising ten distinct field trips to simulated green technology infrastructures. Economics students, who would otherwise never set foot inside an industrial facility, could gain interactive, gamified exposure to cutting-edge ecological operations. The expanded curriculum map – for which a major grant application was recently rejected under the universally frustrating bureaucratic euphemism of "over-subscription" – aimed to develop nine additional modules:

- Water treatment works: navigating the purification cycles of municipal drinking water.
- Wastewater treatment plants: managing the biochemical filtration and sludge processing loops.
- Precision agriculture: activating autonomous, GPS- and satellite-driven fertilizer-spreading tractors using drone-mapping telemetry.
- Concrete recycling facilities: directing the mechanical crushing and sorting of construction debris.
- Plastic recycling plants: managing the polymer sorting and pelletisation pipelines.
- Pharmaceutical logistics: supervising the robotic and automated material-handling systems of a high-tech medical warehouse.
- Nuclear radiation infrastructure: controlling the safety and shielding containment protocols of a nuclear power plant.
- Textile reclamation: managing the conversion of waste fabrics into sustainable apparel.
- Waste-to-energy plants: directing the incineration and emissions-scrubbing parameters of modern thermal waste processing.

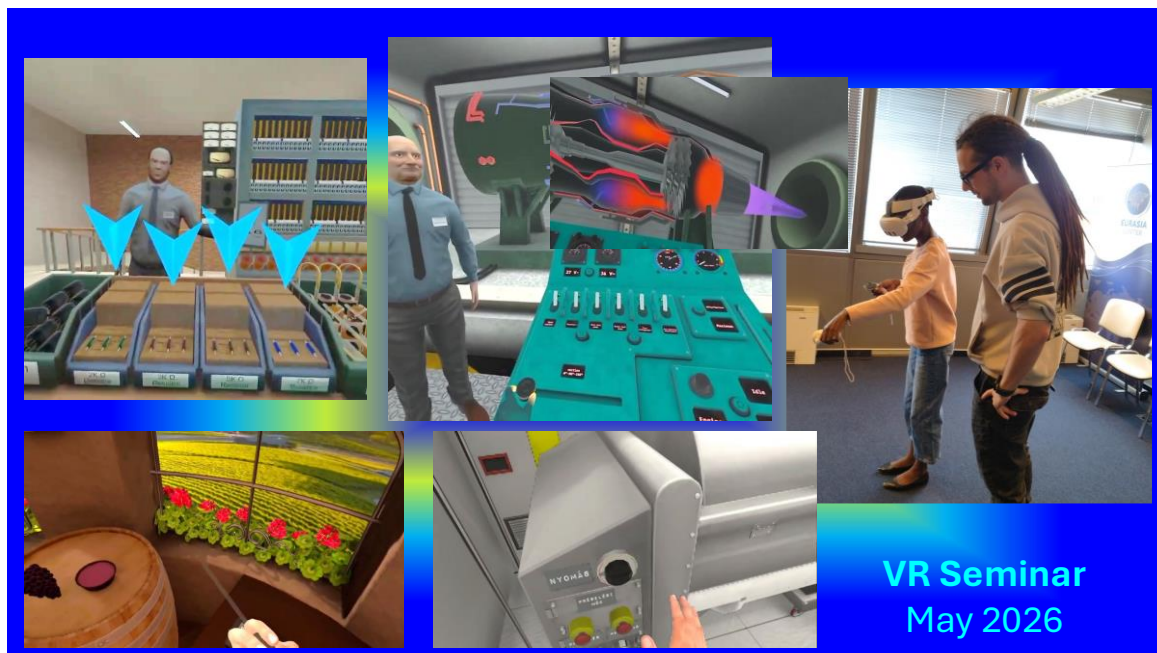


Figure 3. The spectrum of immersive learning: historical scientific simulations, interactive green operations, and empirical headset testing with the international MA student cohort (Tózsá & Komlódi, 2026)

For a visual demonstration the “Immersive VR applications at the John von Neumann University” is accessible online (<https://www.meta.com/experiences/nje-vr/6846172395429286/> and <https://www.meta.com/experiences/nje-vr-winery-tour/24580119754927657/>)

As documented in our recent collaborative research (Tózsza & Komlódi, 2026), where the technical architecture of these systems was meticulously delineated, this immersive approach represents the current zenith of skill-based educational technology. Yet, the empirical feedback from the international graduate cohort mirrors the structural malaise identified throughout this treatise. For those students willing to attend the laboratory sessions, the novelty of the Meta Quest interface was undeniably engaging. However, this engagement was fleeting; it lacked the structural gravity required to act as an intrinsic motivational anchor for their master’s program. The sophisticated allure of Neumann’s vacuum tubes, Kármán’s jet engines, and interactive green technologies could not compete with the real, transactional drivers of modern international education: the acquisition of a Schengen visa and the credentialism of a European diploma.

To position these institutional developments within the broader global landscape of educational technology, it is essential to examine the theoretical and empirical underpinnings of virtual reality (VR) pedagogy. The structural foundations of successful VR-based learning are deeply rooted in a tripartite framework; specifically, the alignment of instructional learning contents, specialized VR design elements, and robust learning theories is critical to maximizing the educational efficacy of the medium (Radianti et al., 2020). In terms of pedagogical implementation, the efficiency of experiential learning and virtual field trips is optimized when teaching is conducted within a controlled VR environment managed by a single lecturer and broadcast to students online (Veitch et al., 2025). This decentralized model ensures that immersive and interactive experiences remain accessible without the prerequisite of specialized, high-end hardware.

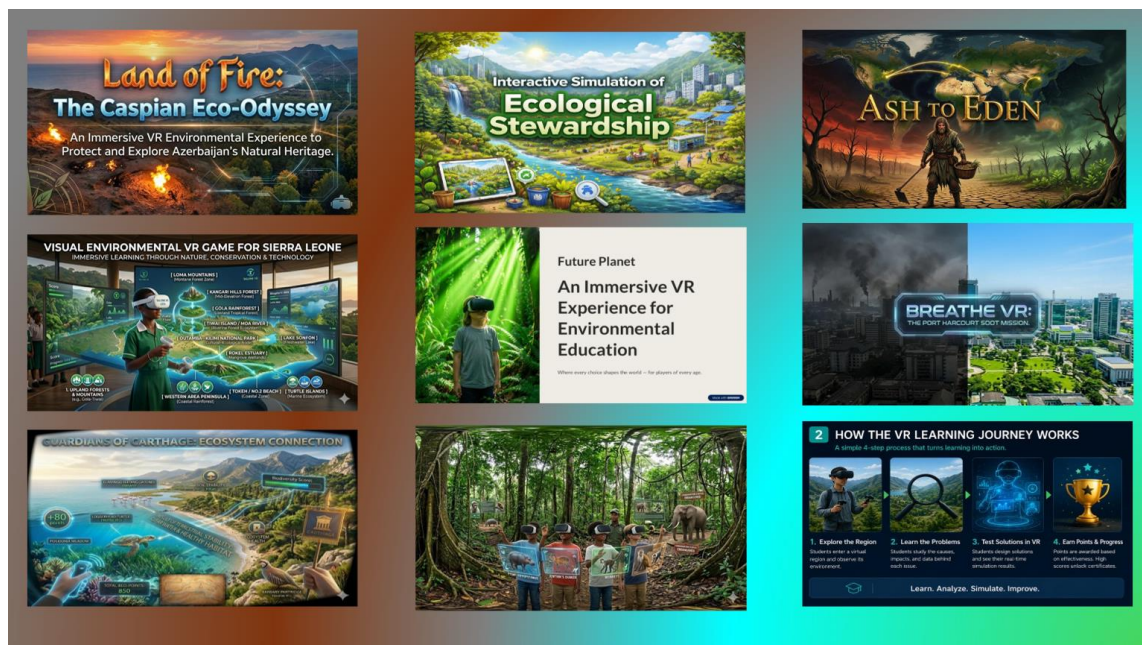


Figure 4. Conceptual frameworks of gamified VR applications designed by international students of the Regional and Environmental Economics MA program. The projects illustrate student-driven immersive solutions aimed at enhancing environmental awareness and biodiversity conservation tailored to the ecological challenges of their respective home countries as part of the Environmental and Nature Conservation course at the John von Neumann University (NJE, 2026)

Furthermore, the cognitive benefits of this technology are particularly pronounced in hands-on operations; executing manual tasks and procedural adjustments in immersive VR fosters a superior cognitive understanding of technological workflows compared to traditional, text-based instructional materials (De Witte, 2025). However, technological sophistication must be balanced with psychological considerations. While VR inherently generates high levels of presence and situational motivation, the technology alone cannot sustain long-term learning engagement if the students' intrinsic, long-term educational goals are absent (Makransky & Petersen, 2021). Blending these global pedagogical principles with active student co-creation, a practical application was realized at John von Neumann University. Within the Environmental and Nature Conservation course, international master's students were tasked with designing gamified, immersive VR applications tailored to educating peers on the natural environmental protection challenges unique to their respective home countries (NJE, 2026).

4. The Psychology of Disinterest – Dopamine-Driven Loops and the Architecture of Cognitive Extraction

To comprehend the failure of both classic humanist narratives and cutting-edge virtual simulations in the modern lecture hall, one must dissect the profound neurobiological and cognitive mutation characterising Generations Z and Alpha. The contemporary international student does not merely possess a shorter attention span; their cognitive architecture has been fundamentally rewired by global digital infrastructures. The lecture hall is no longer competing with alternative sources of knowledge, but rather with highly sophisticated algorithms engineered for cognitive extraction – systems designed to monetize human attention by exploiting primitive evolutionary vulnerabilities. Johann Hari (2022) introduces the systematic causes of attention crisis in the information age particularly the influential power of the Big Tech companies through smartphones. His pivotal work posits that the attention crisis is not an individual shortcoming, but a structural consequence of profit-driven algorithms deployed by tech giants to monetize human cognition

The "secret" underlying the absolute hegemony of platforms such as TikTok and Instagram lies in the exploitation of variable reward schedules – a mechanism identical to the neurological engine of compulsive gambling. Every swipe introduces a micro-dose of novelty, triggering a rapid, dopamine-driven feedback loop. In this environment, cognitive gratification is instantaneous, effortless, and infinite. The neural pathways of these younger generations have been conditioned to respond exclusively to these high-frequency, low-effort stimuli (Lopes, 2023 and Zhou, 2024).

When a brain thus conditioned enters a university classroom, it encounters a landscape of acute sensory deprivation. The linear progression of a lecture, the slow contextual development of economic concepts, and the intellectual patience required to parse structural externalities represent a form of cognitive labour that the modern student's neural apparatus is increasingly unequipped to perform. This is the essence of what social scientists term cognitive extraction: the platform economy has so thoroughly harvested the students' capacity for sustained focus that deep, contemplative learning has been effectively priced out of their cognitive marketplace. What rolled out in the classroom as disinterest is, in reality, a structural inability to anchor attention in any medium lacking an immediate, algorithmic reward.

This cognitive mutation alters the very objective of university enrolment. In the absence of intrinsic intellectual curiosity, higher education undergoes a process of radical commodification. For the international graduate cohort, the university experience is stripped of its academic

sanctity and transformed into a purely transactional mechanism. The acquisition of knowledge is replaced by instrumental credentialism; the lecture hall is merely a bureaucratic checkpoint necessary to secure a Schengen visa, geographic mobility, and a European diploma. The quality of the learning experience is irrelevant to the consumer; the credential is the sole product of value. According to Bridget Cole et al (2025) short-form videos, and the instant gratification that they bring, have an effect on the brain's ability to process information. The cognitive leap of going from passively consuming TikTok to actively concentrating on a reading task may be too great.

Consequently, the only stimuli capable of piercing this wall of algorithmic conditioning outside of mandatory administrative compliance are those that mimic the high-stakes, visceral feedback of the digital realm. The modern student is accessible only through extreme emotional or physical friction – hence the fascination with the hyper-stimulation of a virtual reality skyscraper descent or the somatic shock of a real-world bungee jump. The middle ground – the space of intellectual contemplation, historical synthesis, and regional economic analysis – has dissolved into a vast, unbridgeable cognitive chasm.

5. The Academic Inertia – Professional Rivalry, Tech Gatekeeping, and the Crisis of the Cathedra

While the demand side of higher education has mutated through algorithmic conditioning, the supply side – the faculty and the institutional apparatus – remains paralyzed by its own structural rigidity. The traditional academic corps is increasingly incapable of adapting to the high-frequency "TikTok-logic" demanded by modern students. This failure, however, is not merely a generational gap in digital literacy; it is an institutional crisis driven by a profound reluctance toward continuous professional development, internal prestige rivalries, and the deliberate sabotage of external innovations by entrenched administrative gatekeepers.

Unlike primary school educators, whose pedagogical frameworks must remain dynamically proximate to the developmental psychology of young pupils, university professors find themselves at the maximum socio-chronological distance from their cohorts. Decades spent atop the traditional cathedra have institutionalized a specific type of professional vanity. There is a widespread, silent resistance to continuous learning within the faculty itself. The adoption of radical interactive models – such as VR or automated 3D avatar simulations – is frequently rejected not because the technology is flawed, but because it threatens the traditional hierarchy. To adopt these new paradigms would require senior academics to abdicate their position as absolute authority figures and become co-learners in a digital space, an existential compromise many refuse to make (Dalgarno & Lee, 2010).

This structural stagnation is further exacerbated by intense internal friction and professional jealousy. When an innovative outlier – often an outsider to the technical discipline – successfully introduces a cutting-edge technological framework, it rarely triggers collaborative institutional emulation. Instead, it activates defensive mechanisms. Academic departments view external innovation as a territorial threat. Rather than evaluating a tool based on its pedagogical efficacy, colleagues often minimize or ignore the initiative to protect their own institutional positioning and vanity.

The most formidable barrier to educational modernization, however, resides within the university's internal IT and infrastructure departments. Under the guise of maintaining cybersecurity, server stability, and procurement integrity, these technical divisions frequently transform into gatekeepers of systemic inertia. In many contemporary universities, the arrival of a new IT

director triggers an immediate, highly disruptive overhaul of internal communication and administrative software pipelines – a cycle often less concerned with technical optimization than with directing lucrative institutional contracts toward preferred external vendors.

When external software developers attempt to deploy pioneering applications within the university ecosystem – such as the NKE virtual campus or Neumann's interactive VR laboratories – they encounter a wall of passive-aggressive resistance from these internal departments. IT personnel routinely refuse to open firewall passages, intentionally stall integration protocols, and exploit bureaucratic loopholes to engineer systemic software delays. This artificial friction serves a dual strategic purpose: it penalizes the innovative external developer with liquidated damages, while successfully neutralizing any progressive educational methodology that did not originate within their own bureaucratic jurisdiction. By making themselves functionally indispensable through the restriction of access, these administrative gatekeepers ensure that the university remains a closed, archaic system, entirely insulated from the technological realities of the twenty-first century (Bell, 2011).

Research findings also suggest that faculty competition and a reluctance to transition away from conventional lecturing paradigms obstruct the authentic adoption of digital tools in higher education (Blin & Munro, 2008). Many, higher education institutions are at a crossroads regarding their role in the current knowledge economy – whether they are to advocate for or oppose new, innovative methods of institutional governance and management (Christensen & Eyring, 2011).

6. The Bifurcation of Higher Education – Technocratic Enclaves versus Credential-Driven Factories

The crisis of student disinterest and institutional inertia does not manifest uniformly across the global academic landscape. Instead, it has driven a radical, structural bifurcation of higher education into two distinct, non-communicating planetary systems: highly successful, hyper-funded technocratic enclaves on one side, and mass-market, credential-driven factories on the other. This polarization mirrors the broader inequalities of the global knowledge economy, where the strategic monopoly over core scientific competencies is increasingly concentrated within a small cluster of elite institutions.

Within the premier tier of global university rankings – such as elite medical, engineering, physical science, and technology institutions in the West and parts of East Asia – student attrition and disinterest are virtually non-existent, despite astronomical tuition fees and gruelling workloads. The "secret" to their immunity against the cognitive malaise afflicting lower-tier academies lies in the clarity of their transactional alignment. These enclaves do not sell abstract enlightenment; they sell direct entry into the upper echelons of the global technocratic elite. The vast financial investments required by these programs are matched by state-of-the-art laboratory infrastructures, cutting-edge corporate integrations, and a ruthless meritocratic selection process. For the students enrolled in these institutions, the return on investment is tangible, immediate, and guaranteed in the form of elite labour market placement. The high stakes of their future professional positions generate a powerful intrinsic and systemic pressure that effectively overrides algorithmic attention traps.

The critical question for regional economics and educational policy is whether this technocratic model offers a reproducible roadmap for smaller, provincial universities ranked hundreds of places below the global elite – institutions such as those dominant in the periphery and semi-periphery of the European higher education space. The definitive answer is an absolute nega-

tive. Peripheral universities cannot emulate this model because they lack the core inputs necessary to participate in this hyper-competitive marketplace: they possess neither the massive capital reserves required to build competitive technological infrastructure, nor the prestige networks necessary to attract world-class research talent.

Simon Marginson's (2016) seminal work illustrates how the global ranking frenzy and intense market competition transform higher education into a steep pyramid, where the pinnacle monopolizes global resources while the institutional base undergoes systematic devaluation. Ultimately, mass credentialism leads to degree inflation and the functional hollowing-out of non-elite universities (Brown, 2011). The structural model of elite universities – which possess robust economic and infrastructural foundations allowing them to issue high-value degrees within the global knowledge economy – remains irreplaceable, creating a widening developmental gap for smaller, capital-deficient institutions attempting to compete on traditional terms (Altbach, 2015).

Concurrently, the lower tiers of higher education are forced into a completely different operational matrix: they become transactional, credential-driven factories. Deprived of the capacity to offer elite technocratic advancement, their survival depends on lowering cognitive and administrative barriers to maintain high-volume enrolment, especially from international tuition-paying demographics. As observed in previous chapters, the core product of these institutions shifts from the rigorous transmission of humanistic or regional economic knowledge to the bureaucratic manufacturing of degrees, visas, and geographic mobility pathways. The mass university becomes a holding pen – a statistical mechanism designed to delay youth unemployment and facilitate immigration, while functionally abdicating its role as a centre of intellectual excellence. The bifurcation is complete: while the global elite trains the specialized technocrats of the twenty-first century, the academic periphery operates as a high-throughput processing plant for administrative credentials, entirely disconnected from the depth and rigor of classical pedagogy.

7. The Technocratic Future – The Death of Knowledge and the Fragility of the Impulse Civilization

The historical trajectory of higher education reveals a profound shift in societal values. A generation ago, when cognitive depth and structural knowledge were the premium currencies of the academy, entry into university was fiercely competitive, and a degree carried immense social prestige. Today, under the pressure of mass democratization and commercialization, access is nearly universal, while the actual knowledge baseline of graduating cohorts frequently converges toward zero. As the prestige of the traditional diploma dissolves, we must confront the final, existential question of this treatise: What is the future of human intelligence in a civilization that prioritizes application-handling skills over structural understanding, and can such a civilization survive its own technological fragility?

The emerging vanguard of this transformation is an impulse-driven techno-world, where cognitive competence is replaced by algorithmic literacy. The "winner" in this new paradigm is no longer the individual who understands the underlying mechanisms of a system, but the user who can navigate an interface with unthinking, hyper-efficient reflexivity. This friction-free, digitized existence is already operational in hyper-technocratic hubs like Singapore. Upon arriving at Changi Airport, the modern passenger stands in an algorithmically managed queue, interacting exclusively with smartphone applications to summon a taxi that already knows their destination and has processed their payment.

To enter this environment armed only with classical, deep humanistic knowledge is to experience the acute alienation of a time-traveller. In 2018, arriving in Singapore without the requisite local transportation applications, I was forced to bypass the digital queue, ascend to the departure level, and employ a traditional, Eastern European method: hailing a taxi the moment it discharged its previous passengers, negotiating the destination verbally, and settling the fare with physical cash. The drivers' profound astonishment at this interaction illustrates how completely human spontaneity has been pathologized by technocratic systems. In that highly digitized matrix, the analogue scholar becomes an "encoded primitive" – a caveman whose stone axe nevertheless retains a hidden, resilient utility when the digital infrastructure experiences systemic failure. Vaclav Smil's (2022) work highlights that the modern world is sustained not by digital applications, but by physical realities – namely energy, materials, food, and water – and without understanding these foundations, civilization is doomed to fail.

This brings us to the core vulnerability of the user-based civilization, a theme increasingly analysed by contemporary political scientists and sociologists. The new knowledge paradigm, built entirely on digital micro-impulses and software-interface proficiency, is structurally incapable of surviving existential systemic shocks. In the event of catastrophic disruptions – such as prolonged geopolitical conflict, electromagnetic failure, or severe infrastructure collapse resulting in the loss of electricity, running water, and automated logistics – the technocratic skill set becomes instantly obsolete. The individual who excels at deploying AI prompts or navigating proprietary smartphone applications is helpless when the screen goes dark.

Sociological research indicates that by outsourcing our cognitive memory, spatial orientation, and critical thinking to automated networks, humanity has engineered an unprecedented level of systemic fragility. A seminal work on the cognitive impacts of digital culture, Carr (2011) demonstrates how humanity is gradually losing its capacity for deep, structural thought as a consequence of automation. Neil Postman's (1993) volume serves as a prophetic sociological treatise on how society transforms into a technocracy that discards human culture and knowledge as redundant ballast at the altar of efficiency. When the digital scaffolding is removed, the modern "skilled" user lacks the deep, foundational knowledge required to reconstruct basic social, agricultural, or mechanical systems from first principles. The tragedy of the contemporary university is that it actively accelerates this vulnerability. By abdicating the rigorous transmission of humanistic, geographical, and economic knowledge in favour of short-term, interface-driven skill development, the academy is training a generation designed for a frictionless digital simulation – leaving them entirely defenceless against the raw, unavoidable realities of a physical crisis.

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Videos

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- VR University: https://www.youtube.com/watch?v=ICu_5xtFz-k
- VR Seminars
 - 1: <https://www.meta.com/experiences/nje-vr/6846172395429286/>
 - 2: <https://www.meta.com/experiences/nje-vr-winery-tour/24580119754927657/>

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