

The Datafied School in the Neoliberal Era: Pandemic Shifts in South Korean Education Policy

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COVID-19 was a critical juncture for education. Powerful tech corporations seized the opportunity to “blitzscale” (Hoffman & Yeh, 2018) data-driven education technologies and push business-friendly policies and infrastructure (Williamson, 2021). Focusing on the case of South Korea, I argue that its pandemic-era policies on “AI textbooks” conflict with public values of education and worked to (1) frame education primarily as an optimization of human capital enhancement for state modernization, (2) further subjugate an already politically vulnerable education sector to technocentric solutions, and (3) consolidate a theory of education driven by techno-utopianism, which generates an important gap between the “perfect” imaginaries and actualities. These shifts add up to a neoliberal vision of the datafied school, in which longstanding debates around “better” education are ostensibly resolved through artificial intelligence and algorithmic technologies ranging from pervasive student surveillance, predictive analytics of student performance, and to hidden commodification of children’s everyday data.

Keywords: AI textbook, education policy, dataveillance, datafication, COVID-19, EdTech, public value, AI and education, neoliberalism

Although the influence of private tech companies in the public education sector is nothing new, COVID-19 provided a unique opportunity for tech corporations and EdTech businesses to scale at an unprecedented speed and scope at a time of widespread fear and uncertainty (Williamson, 2021). Before the pandemic, concerns about the rapidly changing public education sector by global capitalists and EdTech companies ignited a growing body of scholarship to examine the social and psychological impacts of digital education (Livingstone & Haddon, 2009; Mascheroni, 2018; Michael & Michael, 2006). The potential costs of datafication and dataveillance (Williamson, 2015; Yu & Couldry, 2020) in relation to the privacy and autonomy of students, teachers, and parents have been increasingly examined in critical EdTech studies, audience studies, and media and communication studies (Manolev, Sullivan, & Slee, 2019; Regan & Khwaja, 2019; Selwyn, 2015; Williamson, 2017b). Yet what is often overlooked in these discourses are the ways that broader societal anxieties, such as around COVID-19, can accelerate these processes of datafication. The emerging result is an infrastructural environment known as the “datafied school” (Henne & Gstrein, 2023) in which longstanding debates around “better” education can be ostensibly resolved through artificial intelligence and algorithmic technologies ranging from pervasive student surveillance, predictive analytics

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of student performance, to hidden commodification of children's everyday data (Bolin, 2023; Mascheroni, 2020; Van Dijck, Poell, & Waal, 2018).

Engaging critical EdTech and educational policy studies, this study examines South Korea's educational policy responses to the COVID-19 pandemic released from 2021 to 2023, as well as a supplemental policy video published on its official YouTube channel of the Ministry of Education (MOE hereafter). Under the ambitious umbrella term of the "Korean New Deal," we find a multiyear policy initiative to invest in AI and platform technologies for the education sector. The South Korean case emblemizes how major crises provide momentum for sweeping solutions to longstanding dilemmas: The government argued that a datafication of education would not only enable South Korea to remain globally competitive in the vaguest of senses but also to resolve chronic complaints around poor student-teacher ratios, urban/rural divides, and more.

Even though South Korea ranks as the ninth-largest economy in the world, the country has been long criticized for "path dependence," in which new economic and social initiatives are explicitly modeled as retreading the success of the United States and Western European nations (Lee, 2012; Moon & Rhyu, 2010). Though it may not always be accurate, often the country has been driven by an imagined fear of being left behind because of its dark history of Japanese colonial rule and the Korean War (1950–1953). I argue that South Korea is particularly sensitive to its own perceptions of what other western countries are doing precisely because of its historical past. This fear of failing to catch up with competitor nations is often regarded as the central force for its latest technological advancement (Hong, 2023; Kim, 2014), and such a postcolonial South Korean identity is much reflected in other state-led, centrally orchestrated policies that often cite and benchmark the United States and European Union regulations as a point of justification for their new political agenda. Although these strategies of justification in policy work are more strongly oriented toward a narrative of technological modernization and competitiveness (Nam, 2024), Western governments today also struggle with their own fears of being left behind by technological disruptions. The European Commission's (EC hereafter) ambitious initiative, the 2021–2027 digital education action plan (DEAP), provides a telling example of this direction-setting. Hence, I will demonstrate how this relationship to AI and data is then translated into South Korea's own path-dependent regulation and policy arrangement through educational reform policies.

To provide this sense of disjuncture and examine this wider pattern of governments increasingly turning to technology as a solution for education (Vazhayil, Shetty, Bhavani, & Akshay, 2019; Wakunuma, Ogoh, Eke, & Akintoye, 2022), I briefly examine the EC's digital education action plan, another multiyear digital education initiative to build a "Europe fit for the digital age" (Muraille, 2020, p. 1). Though far from perfect in its approach, critical EdTech researchers have often cited the EC's work as navigating this tension between digital transformation and conserving public values of education relatively skillfully (Van Dijck et al., 2018; Muraille, 2020; Rodero, 2023; Zancajo, Verger, & Bolea, 2022). While highlighting the longstanding struggle of South Korea with its path dependence in policy making (Tan & Yang, 2021), the goal of this study is not so much to declare certain kinds of data-driven education better or worse, but to map one example of top-down, government-led framing around technology and education and how such agenda-setting work itself is often driven by and justified through broader myths of modernization and technological progress.

Building on Van Dijck et al.'s (2018) theoretical approaches to public value, this study sheds light on the central tension between the economic and biopolitical conception of education as growing human capital and an intrinsic definition of education as a fundamental human and societal development (Holmes & Toumi, 2022; White, 1990). As a postcolonial critique of South Korea's own struggle with its own path dependence in policy making (Tan & Yang, 2021), this study addresses the urgency of studying COVID-19 era policies as an inflection point toward the datafication of education. Echoing Ball, Dworkin, and Vryonides's (2010) and Fleckenstein and Lee's (2019) analyses on education playing the role of an economic growth engine, I use Henne and Gstrein's (2023) concept of "datafied school" to uncover the ideologies behind the increasing adoption of technologies in public schools and the long historical backdrop to South Korea's valorization of education through policy making.

Education as a National Economic Growth Engine

Scholars concur that education was rarely separated from preparing "the labour force for entry into targeted industries" (Ashton, Green, Sung, & James, 2002; Park, 2013; Salazar-Xirinachs, Nübler, & Kozul-Wright, 2014, p. 6). In the case of South Korea, a country whose postcolonial, modern history has been defined by periods of destruction and reconstruction around Japanese colonial rule and the devastating Korean War in the 1950s, education has been a critical political steering force for state development (Dittrich & Neuhaus, 2023; Fleckenstein & Lee, 2019) as well as the country's postcolonial modernization identity.

Suffering from intense levels of poverty, resource scarcity, and infrastructural destruction following the Korean War (1950–1953), the Park Chung-Hee administration (1963–1979) made rapid economic development as the country's top priority (Kang, 2016). Notably, such priorities often relied heavily on top-down, state-led community development projects like the 1970s' Saemaul Undong (New Village Movement), which sought to modernize rural villages and reduce the disparity between urban and remote areas. Like the New Village Movement, robust, nationwide campaigns and education combined with infrastructural developments (e.g., reconstructing irrigation systems, dams, and building bridges) sought to boost the standard of living and public morale.

Given this context, it is important to note that education has always had specific cultural and political meanings in Korea because of the ways these state-led policies steered the minds of people toward "better" education and "better" societal development. In the way an education system is designed, it affects people's conceptions about the political past, and this is conducive to shaping the postcolonial, modern identity of Korea. Although such top-down, centrally orchestrated policies like the New Village Movement were later exported to other developing countries in Asia and the Pacific as a successful model of state development (Douglass, 2014), it is important to understand the historical background of the country's uptake of ICTs and zeal for education as defining national strengths (Hultberg, Calonge, & Kim, 2017; Park, 2009). As Jeong (1995) puts it, the economic miracle of South Korea was based on the country's "sound educational infrastructure" (p. 7).

Education as Public Value

Because of the very nature of education that enables the economic growth of a clerical class and thus state bureaucracies such as the Prussian model of education (Becker, Hornung, & Woessmann, 2011), scholars in education policy and critical education studies agree with the normative understanding of education as public value (Alford & O’Flynn, 2009; Tooley, 2000). Especially with the increasing platformization, datafication, and commodification of teaching and learning, some scholars argue that platformization could disrupt traditional educational values such as *Bildung* (Van Dijck et al., 2018), a concept that refers to teaching and learning centered around the cultivation of personal characters, emotional and moral development, and maturation (Sander, 2019). However, others assert that the rise of measurement culture (Biesta, 2010), transforming students and teachers to mere numbers and data points, could severely undermine students and teachers’ rights to learn and reduce the meaning of education to a mere teaching of instrumental skills.

Tooley (2000) asserts that there is a fundamental tension between “Education as an instrumental good—for (a) the promotion of certain goods in society or (b) as a preparation for adult life” and “Education as intrinsically worthwhile” (p. 27). Though both ways of conceptualizing education benefit both individuals and collectives, Alford and O’Flynn (2009) argue that the “goods” stated here technically refer to the “outputs,” which are “products” and “services” generated by the public organization of education. They put an emphasis on the difference between “public good” and “public value.” Public values are more than just “outputs.” They are outcomes, “that is, impacts on those who enjoy the value/good in question or on states of nature important to these people” (Alford & O’Flynn, 2009, p. 175). This means, in a normative sense that education carries more than an economic value of “public good” but further encapsulates the power to perform following the social functions of public values: (1) provision of a wider scope of public goods that carry meanings for people, (2) generation of “outcomes” not just “outputs,” and (3) dissemination of intrinsically worthwhile public benefits (i.e., education is supposed to have a broader, if not always immediate, contribution to the public good that is irreducible to market value).

Nevertheless, such a normative theory of education does not imply that the concept of education as a public value is an absolute standard. Rhodes and Wanna (2007) argue that “public value is not a given” (2007, p. 416). What passes as “public value” at any given time is forged in relationships between the individual and society, founded in individuals and collectives, activated, fostered by state/regional governance, and produced and reproduced in “experience-intense” cultural practices (Meynhardt, 2009). In this respect, central to this study is evaluating the very question of who is responsible for steering and anchoring these public values of education and in what ways they do so.

Surveillance Capitalism and Political Economy of Platform Technology

A new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction, and sales; A parasitic economic logic in which the production of goods and services is subordinated to a new global architecture of behavioral modification; A rogue mutation of capitalism marked by concentrations of wealth, knowledge, and power unprecedented in human history. (Zuboff, 2019, Definition section)

There is a great body of literature pointing to data-driven technology as a general “instrument of global surveillance and control for the benefit of an elite group of hyper-capitalists” (Glass, 2020, p. 73). Whether in uncritical literature that maps out business trends of the new digital ecology (Davenport, 2014; Mayer-Schönberger & Cukier, 2013) or much more critical analyses of shifts like “platform capitalism” (Srnicsek, 2015), “rentier capitalism” (Christophers, 2020), “informational capitalism” (Castells, 1996; Cohen, 2019a), and “digital capitalism” (Schiller, 1999), the common diagnosis is that we are in the midst of a new phase of capitalism centered around technologies like AI and digital platforms (Cohen, 2018; Zuboff, 2019).

Shoshana Zuboff (2019) delineates an argument for a type of capitalism that has “at once become a new business model, a new mode of extraction, and a new mode of knowledge production” (Cohen, 2019b, p. 240). It disrupts the socioeconomic-technical ecology of almost all industries by threatening liberal democratic norms and ideals through the use of big data. Building on epistemic features of big data, which are “heterogeneous, unstructured, trans-semiotic, decontextualized, and agnostic” (Zuboff, 2015, p. 76), surveillance capitalism asserts the birth of new forms of value construction in the economy that no longer lies in the production and exchange of commodities but in the commodification, privatization, marketization, and assetization of data (Birch & Muniesa, 2020). Nonetheless, critics of surveillance capitalism point out that the theory is still founded on longstanding strategies of capitalist extraction and that it is not a new form of capitalism (Mueller, 2022). These systems target not only historically vulnerable populations but also affect all people who use data-driven technologies in their work and daily lives. The extractive principles of surveillance capitalism are rapidly spreading into various social domains that have traditionally emphasized some degree of protection and difference from commercial data use and surveillance, such as health care and education.

Although the concept of surveillance capitalism was initially tailored for the United States tech businesses and their strong relationships to the advertising industry, the power of these global tech companies has expanded to the extent that the surveillance economy model is now reproduced in almost all digitally advanced societies (Manolev et al., 2019). Backed by ambitious national and international EdTech initiatives and educational policies as well as the political economy of tech platforms, “the era of so-called ‘big data’ is ushering in new, important changes in educational policy, pedagogical practice, and institutional strategy” (Knox, Williamson, & Bayne, 2020, p. 31; Lewis, 2020).

Growing Up in the Surveillance Age—Dataveillance

One focus of critical EdTech scholarship has been on the increasingly overlooked rights of children to privacy, autonomy, and their digital data use in educational settings (Breiter, 2014; Jarke & Breiter, 2019; Selwyn, 2016). Despite surveillance being a common feature of childhood in the name of ensuring safety (Lyon, 2007; Taylor, 2013; Taylor & Rooney, 2017), what we are witnessing now is a shift from a “surveillance school” (Taylor, 2013) to a “dataveillance school” (Williamson, 2016), a far more intrusive, omnipresent form of surveillance involving data collection across school and home ubiquitously through data-driven technologies. Scholars raise ethical concerns and sensitive implications of infringing students’ basic human rights (Lupton & Williamson, 2017) and even their choices of life by discussing the emergence of “datafied schools” (Henne & Gstrein, 2023) to problematize the exceedingly data-intensive educational environment.

This strand of literature on surveillance and dataveillance shares a common diagnosis that children’s rights to privacy are now “turned inside-out, so that the minutiae of their lives, emotions, and their bodies can become visible for scrutiny and inspection through their data doubles” (Taylor & Rooney, 2017, p. 63). Young generations now face a future where their real-time visibility carries new commercial value, and they have no choice but to participate in an already established, domesticated “surveillance culture” (Mascheroni, 2018). Although education should afford essential opportunities for the children to be completely themselves and be free from external power and control to exercise their rights to autonomy, pervasive data collection and surveillance over children’s data gathered through EdTech used in classrooms have serious implications for unpredictable impacts on children’s lifetimes and futures (Berman & Albright, 2017).

Project Design

Taking Henne and Gstrein’s (2023) and Van Dijck et al.’s (2018) works as a cornerstone of this analysis, this study identifies and concretizes the language and rhetoric used in policy documents and the ways in which they may conflict with public values of education in the context of South Korea during the global pandemic. Focusing on the COVID-19 period, I analyze the MOE’s January 2021 policy plan, “2021년 교육부 업무 계획(발표),” as well as its follow-up in 2023 (No comparable plan was released in 2022).

In tandem with these policy texts, which set broad, multiyear educational reform initiatives to digital transformation in public schools, I also examine a supplemental policy video. Promoted as the “Korean New Deal,” this video is an important part of this wide-ranging reform policy directive of the Yoon Suk Yeol administration launched in 2021. Titled “There has been no school like this—This is the real future school,” this short, animated video on the MOE’s official YouTube channel introduces the centralized government agenda to reform the public education system from the infrastructural level and presents its vision for future education. As the term “Korean New Deal” suggests, the country’s fear of being left behind among other countries becomes manifested through benchmarking the old legacy model of the United States in the 1930s, the New Deal. This demonstrates the consistent critiques that South Korea has been receiving with its path dependence in policymaking (Jang & Lee, 2017; Tan & Yang, 2021).

In this sense, I look at policy documents as both performing and enacting centralized government intent. Considering the introduction of a new reform policy often coincides with a change in administration (Jang & Lee, 2017), the chosen educational policies fit into the current Yoon Suk Yeol administration's agenda of strengthening South Korean political capital by fully promoting and implementing the latest information technologies in the public sector. Therefore, it is important to understand how South Koreans are using the European Union or other developed countries' policy cases in their policy narrative as a point of justification. Given that both the European Union and South Korea are two strong advocates of EdTech use, the pairing of these two sites will help better understand how the policy arrangements of different regions have similarities and differences and shape broader trends of EdTech use more globally.

Drawing on tools from critical discourse analysis (Fairclough, 1992), the policy texts and video are analyzed contextually and critically by reading the common themes. The textual analysis focuses on exposing types of power relations and their motives linked to "political intervention and social change" (Kress & van Leeuwen, 2006; Machin & Mayr, 2012, p. 4). Given how images exert stronger influence than language as they deliver messages within just one brushstroke without needing extra words (Barthes, 1972), the direct complementation this video is making to the textual policy document transcends its linguistic limits. Furthermore, considering this is the only policy video from the MOE's official YouTube channel that has both English and Korean subtitles and that is an animated film, it signifies the government's intent to promote this initiative to the wider public—and perhaps to young students directly as well.

Neoliberal Vision of the Datafied School

Education as a Means of Human Capital Enhancement for the State Modernization

The South Korean policy documents are dominated by an explicitly neoliberal framing of education, in which individuals are asked to internalize and generate entrepreneurial and value-generating life even across previously less capitalistic domains (Castree, 2010). The document states the fast-changing social and economic conditions as the reasons for innovation in educational reform.

Digital transformation is accelerating, and changes and uncertainty are deepening across all social and economic sectors, including the 4th Industrial Revolution and demographic changes. Individual competence improvement is more important than ever due to automation of simple repetitive tasks, higher demand for jobs in high-tech fields, decrease of a (working) producing population. (MOE, 2021a, p. 7)

Referring to conditions like the fourth industrial revolution, digital transformation, population decline, and uncertainties like COVID-19 (MOE, 2021, p. 7), the text reimagines education around the needs of social and economic changes. These pronouncements of external conditions extend the general discourse of education while placing its emphasis on enhancing individual human capital (Lee, Liu, & Wang, 1994). At the same time, this new vision of education is discussed in ways that fit with the Yoon administration's broader interest in harnessing economic capital at the state level.

Cultivate cutting-edge technology talents through digital innovation sharing education system. Each division's talent mobilization is pertained to educational content discovery and employment, entrepreneurship, R&D research support. Focus on collective competence for the digital high-tech sector talent mobilization. * (Examples) Artificial intelligence, big data, future automobiles, next-generation semiconductors, customized healthcare, intelligent robots, new energy industry, AR/VR, etc. (MOE, 2021a, p. 18)

The keywords here are "cultivate, talent mobilization," and "collective." Influenced by the aforementioned modernization projects of the 1970s–1980s under the Park Chung-Hee administration, these terms recall the militarized language of the post-war era. The first two statements above imagine students as subjects of "cultivation" and "mobilization." To match the vision of accomplishing a high-tech learning environment, the third statement ties the two together to make references to collective, united, combined talent that forms a type of concerted force, not only for individual capital enhancement but for collective state competitiveness.

In fact, such a systematic mobilization of human talent has been a recurring policy strategy in South Korea (Dittrich & Neuhaus, 2023). Aimed at driving state modernization and finding its place in the world of global competition, the ideological shift during the post-Korean war period from the 1960s–1980s as well as the Asian financial crisis in the late 1990s (Dittrich & Neuhaus, 2023) have restricted the definition of education to the one that was focused on creating more productive members of society rather than valorizing the fundamental role of education to nurture human and societal development, which, in a normative sense, is the public value that Meynhardt (2009) discussed earlier in the literature review.

Expansion of the innovative shared university project to nurture new digital technology talent that supports nurturing talent in cutting-edge fields regardless of major through sharing and cooperation (8 in 2022 → 13 in 2023). Expansion of talent training projects to enable timely and focused training of talent in new and high-tech industries that will lead national innovative growth. (MOE, 2023a, p. 12)

Until 2026, "1 million digital talents" establishment of a data-based talent training system. Promoting the enactment of the "Basic Act on National Talent Development" to gain an upper hand in the competition for technological hegemony. Nurturing future core talent that will lead the way in solving international challenges. (MOE, 2023a, p. 11)

To lead "national innovation growth" (MOE, 2023a, p. 12) and gain "an upper hand in the competition for technological hegemony" (MOE, 2023a, p. 11), the values of education begin to shift from supporting and fostering "individual growth and creativity" to mobilizing collective "digital talents" to "solve international challenges." These military-inspired languages do not appear in organic ways from the public discourse but from the kinds of long historical and cultural vocabulary continuously used and promoted by political stakeholders with specific aims (e.g., strengthening military power to increase national competitiveness). Such a state-led discourse is carefully packaged in a way that could then exert a stronger resonance for Korean audiences, thus shaping the politically and culturally resonant part of the postcolonial modernization identity of Korea.

Notably, this view of systematic talent mobilization also valorizes this technocentric model of educational infrastructure in addition to spreading the tenets and values of the new administration. Shining back on the past pattern of South Korean policies that frames education as a type of modernization tool, it is important to understand how education was mobilized for the “‘great enterprise’ of establishing Korea as a sovereign and modern nation-state in the capitalist world system” (Dittrich & Neuhaus, 2023, p. 547). Such discursive framing reproduces the discourse of the public education system as a kind of waiting room in which students are recategorized as a mere means of fulfilling the needs of the current socioeconomic system. What is missing in this discourse are the values of education in teaching and developing children’s critical thinking and ability to critique social and political actions and experience a deeper level of human and social development in further changing and transforming society.

Interestingly, much like the South Korean text, there are some significant parallels in the European Union. The European Union text starts out by emphasizing the external, socioeconomic transformations taking place in societies, with a particular emphasis on “the labour market and the future of work” (European Commission [EC], 2020, p. 2).

Rapid digitalization over the past decade has transformed many aspects of work and daily life. Driven by innovation and technological evolution, the digital transformation is reshaping society, the labour market and the future of work. Employers face difficulties in recruiting highly skilled workers across a number of economic sectors, including in the digital sector. Too few adults are up- and re-skilling to fill these vacancies, often because training is not available at the right time and in the right place. (EC, 2020, p. 2)

Although the statement above is from the introduction of the Digital Education Action Plan (EC, 2020), the 20-page document repeats these references to socioeconomic changes taking place outside the classroom, such as “digitalization, labour market,” and “economic and digital sectors,” which are all heavily concerned in economic terms.

We live in a digital era that this is a huge advantage. Digital literacy and skills are essential and should no longer be ignored. These skills should be constantly developed hand-in-hand with the digital infrastructure. This is the only way that investment in technology will prove to be efficient. (EC, 2020, p. 7)

To thrive in a technology-driven economy, Europeans need digital skills. Everyone, including students, jobseekers, and workers, will need to be digitally skilled and confident to succeed in a rapidly changing environment and adapt to new and emerging technologies. Levels of digital skills in the EU are still low, albeit gradually improving, while the digital transformation is accelerating. (EC, 2020, p. 13)

Promoting high-quality and inclusive digital education must be a common endeavour across society. Governments, education and training institutions, the private sector and the public all need to be engaged in this endeavour in order to develop a high-performing digital education ecosystem....Key players, in particular teachers and trainers, should

be better equipped and trained to participate more effectively in the digital transformation of education and understand the opportunities this can bring, when used effectively. (EC, 2020, p. 10)

Although the text credits technological evolution for driving society's change, it further calls attention to achieving "know-how" (EC, 2020, p. 3), "up- and re-skilling" (EC, 2020, p. 2), and accruing essential human capital and required skills for life in a fast-changing "digitalized world" (EC, 2020, p. 9). The key underlying notion here is that education is almost exclusively valued and desired only when it contributes to economic development at broader, state, and/or supranational levels. It is not only South Korea that struggles with this fear of "catch-up innovation" (Hong, 2023) but also the European Union, which inescapably experiences the same neoliberal pressures of global competition and external trade. The genuine objective fear of being left behind is not anchored in what the European Union or other developed countries are doing but rather in this dominant neoliberal imperative that dominates the world.

Respondents from several Member States consider it essential to invest in infrastructure, digital skills, digital literacy, and secure online environments (platforms/ tools) with high-quality content. Respondents said that educational institutions should do this by making the most of innovative solutions offered by private education providers and technology developers. (EC, 2020, p. 7)

Questions about whether there is any other viable solution are secondary in this discourse. Other than what is suggested here (i.e., investing in infrastructure, listening to innovative solutions offered by private education providers and technology developers, and platformizing the classroom with digitized content), there is no alternative. In fact, this is precisely how neoliberalization is accomplished (Harvey, 2007). As seen from the famous political slogan by Margaret Thatcher in the 1980s (Bateman, 2002), the key is to eliminate all other viable options. As a result, the European Union policy can successfully speak for and vocalize the interests of private EdTech businesses and those hegemonic actors like market leaders and educational experts by directly quoting them. This gives a stronger push for their neoliberal agenda, where the fundamental epistemological role of education as a public value is conflicted by the transfer of authority from teachers/institutions to private actors. This shift of power normalizes the commercial parties exercising more power in the public education sector. As Giroux (2015) points out, education has been reduced to intellectual-labor power whose reimagined functions and roles in neoliberal rationality are to "enhance" (EC, 2020, p. 8), "boost" (EC, 2020, p. 5), and "advance" (EC, 2020, p. 9) learners' "(digital) skills and competences" (EC, 2020, p. 12) for the future labor markets.

Through the unpacking of the European Union and South Korean policy discourses, we can see both texts recalling the past configuration of socioeconomic policies to accomplish their neoliberal agenda for education. Optimized for the needs of industrial society, their explicit argument for educational reform drives their neoliberal vision of the "datafied school" (Henne & Gstrein, 2023), a full-fledged technological infrastructure that reimagines the space of classrooms.

"Everywhere, Anytime" Classroom: Technological Solutionism

Both South Korean and European Union policies call for an immediate infrastructural reform of the educational environment that is filled with high-performing digital gadgets that would enhance "personal fulfillment, social cohesion, economic growth, and innovation" (EC, 2020, p. 2; MOE, 2021, p. 13, 18).

The deployment of the vast and growing array of digital technologies (apps, platforms, software) to improve and extend education and training. Online, distance and blended learning are specific examples of how technology can be used to support teaching and learning processes. (EC, 2020, p. 2)

In the case of South Korea, the text interprets this new educational environment as superior to the older types of classrooms without AI and algorithmic technologies.

Select schools for conversion to future schools, taking into account the urgency of conversion and connection with educational policies such as the high school credit system and future textbooks, and disseminate this future school model ('21~). Infrastructure: For kindergarten, elementary, middle, and high school on- and off-line blended learning, AI-based K-Edu inclusive platform and NICE intelligence system to be set up by '23." (MOE, 2021a, p. 15)

To justify their "classroom innovation," the 2023 MOE's policy document cites the cases of the United States and the United Kingdom that have already incorporated AI and EdTech into their classrooms.

Establishment of a "Classroom Innovation Plan" (i.e., a project·discussion class·AI·EdTech utilization class) to innovate teaching and conduct evaluations linked to this plan by the first half of 2023 (~'23 phase). ※ Implementation of student participation classes and related evaluations, and expansion of various class innovation cases such as IB programs. (MOE, 2023a, p. 4)

Support for strengthening the educational capabilities of general high schools, such as strengthening the role of state high schools as a leading model for public education innovation and expanding school autonomy through cooperation between schools, offices of education, and local governments. ※ Promoting innovation in school management methods by referring to the cases of Charter School in the United States and Academy in the United Kingdom. (MOE, 2023a, p. 5)

It is by chasing after what other western countries are doing and using the rhetoric of problematizing the space of classroom, the MOE justifies its case for an infrastructural reform. Interestingly, these normative horizons are often populated with the kinds of goals and principles that are very close to EdTech industries' framing of education. Blackboard, a major global EdTech company (now merged with Anthology), which showcases an array of Learning Management Systems (LMS) and data-driven solutions

to K–12 schools, government, higher education, and other businesses, emphasizes the importance of ubiquitous nature of data gathering through hyperbolic rhetoric about tracking students beyond the limits of time and space. The same goes with Shepherd, an American EdTech startup backed by Y Combinator, one of the major tech startup accelerator programs in California. The business also embraces such rhetoric and demonstrates explicit reliance on collected data which reconfigures time and space.

Meet your learners wherever they are. And in the ways that work best for them. With Blackboard Learn, training content and courses are accessible from anywhere and at any time. Make training efficient and keep employees and contractors engaged with this powerful business Learning Management System (LMS). (Blackboard, n.d.)

Here is how Shepherd works. Shepherd's real-time performance monitoring facilitates early intervention, preventing academic challenges from worsening....Our AI-powered tutor, Shep, is available 24/7, providing students with immediate feedback, explanations, and guided learning paths anytime they need—ensuring support is always just a click away. (Shepherd, n.d.)

The implication is that thoroughly embedded, data-intensive technologies can easily turn into a surveillance mechanism for the behavior control of students (Crooks, 2019; Manolev et al., 2019). Consider ClassDojo, "one of the most prominent technological tools supporting schools to manage classrooms and student behaviour" (Manolev et al., 2019, p. 36). In the United States, the platform was first launched as a behavior-tracking and feedback tool. Then, it quickly turned into a broader, school-based social media platform that incorporated gamified behavior-shaping features. The platform continues to expand its functions to suit this idea of an "everywhere-anytime connective environment" (Manolev et al., 2019). When these data-intensive, surveillant technologies are plugged into the learning environment, the site of teaching and learning easily turns into a domain of appropriating children's real-time data, which carries economic values (Yu & Couldry, 2020). Underlying it all is this wider belief in the power of AI-based technologies as supposedly the best solution to all the problems that older classrooms were facing.

Interestingly, both the European Union and South Korea are seeking to develop a similar platform by commissioning different stakeholders. Pivoted from nonprofit to for-profit status, American EdTech company, edX's Massive Open Online Course, also known as MOOC, is now an umbrella term for platforms that provide open-access online courses aimed at the wider public (Pappano, 2012). Although the European Union reflects proposals for developing MOOC platforms by diverse stakeholders in the provisional name of "European exchange platform" (EC, p. 11), the MOE introduces the more centralized form of "K-MOOC" (MOE, 2021, p. 21), a newly integrated Korean-style, online open-course platform, which is said to connect various lifelong learning and training platforms at the central and local government levels and provide big data-based recommendations for customized classes and point systems for students. Even though the MOE states that it would support the educational competency of schools to establish the "leading model for public education innovation" and "leading public education" (MOE, 2023a, p. 4), features of these platforms are derived from commercially available personalized platforms such as Netflix or Amazon (Roberts-Mahoney, Means, & Garrison, 2016).

When public space and infrastructure are carved out for private profit, then the public values that were traditionally anchored in educational institutions can be put at risk (Van Dijck et al., 2018; Williamson, 2018). This reflects a broader set of attitudes toward technological solutionism, endorsing emergent technologies in the name of personalized learning and higher efficiency (Haven & Boyd, 2020). As Amoore (2020) notes, while “politics express the fallibility of the world and the irresolvability of all claims, the algorithm expresses optimized outcomes and the resolvability of the claim in the reduction to a single output” (p. 10).

New Educational Paradigm of Techno-Utopianism

Such a shift in discourse drives “technology-based reformatory efforts in education” (Williamson, 2017a, p. 1). But what requires even greater attention is discerning the gap between imaginaries and actualities that these policy initiatives try to present through both textual and audiovisual materials. This four-minute promotional policy video publicized on the MOE’s YouTube channel is emblematic of the Yoon administration’s policy agenda for educational reform. The video description notes, “The first anniversary of the Korean New Deal that we all achieved together. We invite you to that mysterious journey!” (MOE, 2021b, Description).

Under the name of the “Korean New Deal,” the video invites viewers to celebrate and engage in the Yoon administration’s accomplishment for announcing this new model of a futuristic school named “Green Smart Future School,” featuring an influx of artificial intelligence, facial recognition, and algorithmic technologies ranging from student surveillance to predictive analytics of student performance (Figure 1).

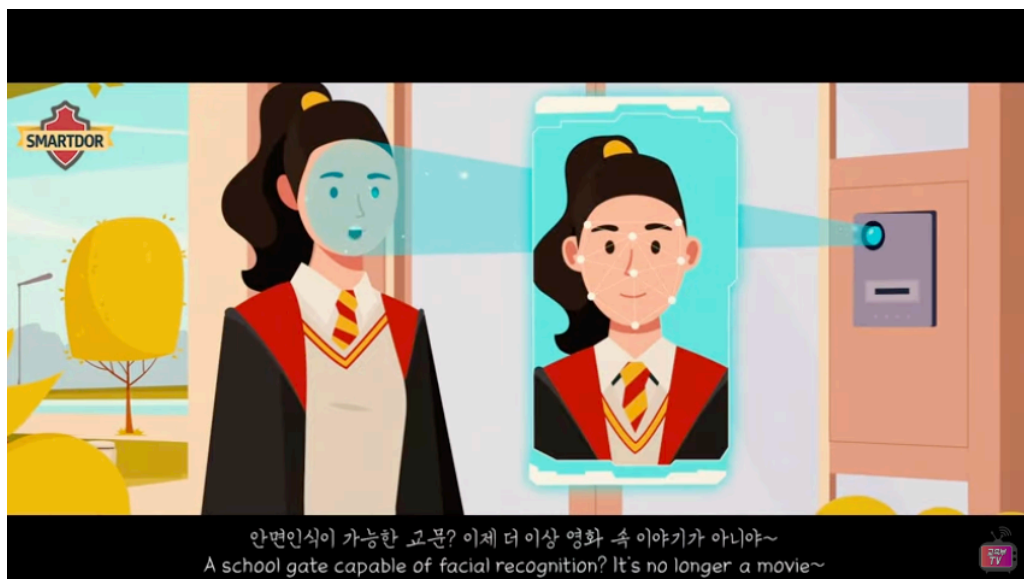


Figure 1. Promotional policy video by 교육 TV, the official YouTube channel of the Ministry of Education (2021b, 00:01:34).

Although the implications for children's privacy and autonomy are entirely disregarded in this video, this new model of future school is portrayed as an ultimate utopian space "where magical things happen" (Figures 2 and 6). The video offers a sense of enchantment and social promise that all children's imaginations and dreams should come true in these spaces (Figures 3 and 4) with the help of sophisticated technologies.

With the pitch-dark screen in combination with the ominous music and narration in the background, the audio and visuals are designed to evoke the international best-selling Harry Potter franchise. Fictitious schools named Smartdorf, Grinergy, Ravensclass, and Schoolpuff mirror the concept of Hogwarts and portray technologies like facial recognition and personalized learning as enabling the required skills of the modern era that education should teach. As seen in Figures 4 and 5, how these technologies align to nurture the diversity of children's talents and career choices echoes the discourse of "personalization" and "customization" in the MOE's press release document (MOE, 2023b).



Figure 2. Promotional policy video from 교육TV, the official YouTube channel of the Ministry of Education (2021b, 00:00:10).



Figure 3. Promotional policy video from 교육TV, the official YouTube channel of the Ministry of Education (2021b, 00:01:57).



Figure 4. Promotional policy video from 교육TV, the official YouTube channel of the Ministry of Education (2021b, 00:01:41).



Figure 5. Promotional policy video from 교육TV, the official YouTube channel of the Ministry of Education (2021b, 00:01:46).

The key word here is “맞춤 Customization” (MOE, 2023b, p. 1), which appears in each category of the MOE’s reform agenda. The text parallels much of the discourse prevalent in the tech industry, which promotes features of personalization and customization. By promising to customize education for (1) students, (2) families and parents, (3) provinces and regions, and (4) industries, this discursive framing pressures us to rethink education as something that somehow should suit the “modern” lifestyle and “modern” society. Although its implications for educational agency and resistance require further reflection, the primary emphasis placed on personalized education helps push the government to accomplish “a ground-breaking shift of classroom teaching” (MOE, 2023b, p. 1) and develop and implement an “AI-digital textbook” (MOE, 2023b, p. 1), a computer vision tool that is similar to iPads or tablet PCs, which would customize the curriculum based on the student’s pace of learning.

With 2023 as the first year of education reform, promote education reform through 4 major reform areas and 10 core policies. Thorough preparations in 2023, including discovering excellent models through pilot operations. From 2024, focus on nationwide expansion and on-site establishment of these tech infrastructures. (MOE, 2023b, p. 1)

The Ministry of Education, under the vision of “Education reform, the beginning of Korea’s leap forward,” aims for (1) “Education that becomes the driving force of national development” for the growth of our country, (2) “Education that nurtures everyone based on freedom and creativity” for the welfare of our people. (MOE, 2023b, p. 2)

Ultimately, such discursive framing is used to validate and legitimize the new administration's neoliberal agenda of accomplishing technocentric and business-friendly infrastructure that regenerates symbols of modernization and positive infrastructural imaginaries (Figure 6). It leaves very little room to question the ramifications of this initiative and intensifies the everyday culture in which children's inescapable connections to the online world disrupt their rights to "freedom and creativity."



Figure 6. Promotional policy video from 교육TV, the official YouTube channel of the Ministry of Education (2021b, 00:00:22).

Conclusion

Drawing on an analysis of policy documents and relevant textual and audiovisual materials, this study uncovered the state-led educational reform discourse that parallels those discourses found in the tech industry. By identifying nuanced patterns of normative, prescriptive thinking, and technocentric ideologies, this study reveals some emerging conflicts that appear across the new administration's reform policy that show a nuanced gap between their imagined vision of a future school and actualities. Since any potential changes in educational policies require a discourse to validate and frame them (Yu & Couldry, 2020), the findings discussed in this study are not restricted to the context of South Korea but also could be considered in other countries, particularly those that witness a similar neoliberal push from governments. The analysis further demonstrates the role of policy papers as signals, calibrating expectations and decision making across regional governments, corporations, investors, school districts, and intermediary government bodies to confidently claim that they can fully push for their technological promotion to match centrally orchestrated government policy.

In conclusion, I contend that these pandemic policies recategorize the space of the classroom as an infrastructure that requires a technological upgrade. These state-led pandemic-period policy discourses work to (1) frame education primarily as a means of human capital enhancement for state modernization, (2) further subjugate an already vulnerable state of public education through technocentric solutions, and (3) present a new paradigm of education that is driven by techno-utopianism, which creates a critical gap between “perfect” imaginaries and actualities.

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