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What is New in Higher Education in Japan and South Korea - 2024?

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Abstract

Higher education systems in Japan and Korea are experiencing profound transformations due to demographic shifts, economic challenges, and rapid advancements in digital technology, particularly artificial intelligence (AI). Both nations face declining youth populations, raising concerns about university sustainability and prompting policy interventions to maintain enrollment and institutional competitiveness. AI is reshaping higher education by enhancing personalized learning, automating administrative processes, and fostering interdisciplinary research collaborations. Japan has responded by integrating AI-driven education policies, promoting digital literacy, and fostering university-industry partnerships. Additionally, universities are expanding internationalization efforts to mitigate demographic declines, attract global talent, and ensure financial sustainability. Similarly, Korea has implemented policies such as the Study Korea 300K Project, aiming to host over 300,000 international students by 2027, and university-industry collaboration initiatives like the Glocal University 30 Project to align education with labour market needs. Despite these advancements, challenges remain, including ethical concerns surrounding AI, disparities in digital access, financial instability among smaller institutions, and the over-reliance on international student tuition. This study examines these developments, analyzing risks, opportunities, and key lessons. By leveraging AI responsibly, strengthening global partnerships, and aligning education with workforce demands, Japan and Korea seek to maintain a resilient and globally competitive higher education sector amid evolving socio-economic landscapes.

Keywords: Higher Education Systems, AI, Demographic Decline, Internationalization, Policy Reforms, Japan, Korea.

Introduction

Higher education systems in Japan and South Korea (hereafter, Korea) are undergoing profound transformations, shaped by demographic shifts, economic challenges, and intensifying global competition. Both countries face declining youth populations, prompting governments to implement strategic policies to sustain enrollment and enhance institutional competitiveness. Simultaneously, advancements in digital technologies, particularly Artificial Intelligence (hereafter, AI), are driving significant changes in

teaching, research, and university administration. These factors necessitate a re-evaluation of higher education structures, financing, and internationalization strategies to ensure long-term sustainability and global relevance (Rose & McKinley, 2018).

In Japan, AI is revolutionizing higher education by enhancing personalized learning, streamlining administrative processes, and fostering interdisciplinary research collaborations since the late 2010s. Universities are leveraging AI to analyze student performance, develop adaptive learning models, and improve administrative efficiency. Notable partnerships, such as those between Carnegie Mellon University and Keio University and between the University of Tsukuba and the University of Washington in 2022, highlight Japan's commitment to integrating AI into education and research. Additionally, Japan's Ministry of Education, Culture, Sports, Science, and Technology (hereafter, MEXT) has introduced policies promoting AI literacy among faculty and students to ensure responsible and effective AI utilization in 2023 and expanded initiatives in 2024. However, challenges persist, including concerns over data privacy, ethical AI usage, and the digital divide between well-funded institutions and smaller universities struggling to adopt new technologies.

Parallel to AI advancements, Japan's declining youth population poses a substantial threat to university sustainability. The number of 18-year-olds is projected to fall below one million by 2031, significantly reducing university enrollments. In response, universities are intensifying efforts to attract international students, diversify revenue sources, and implement lifelong learning programs targeting working professionals. The University of Tokyo, for example, has diversified its income streams, while other institutions have restructured their academic offerings to remain competitive. Despite these efforts, financial instability remains a concern, particularly for smaller private universities that struggle to meet enrollment quotas.

Korea, like Japan, faces demographic challenges that threaten the viability of its higher education sector. To counteract declining enrollments, the Korean government has launched the Study Korea 300K Project in 2023, aiming to host over 300,000 international students by 2027. This initiative focuses on attracting students to regional universities to stimulate local economies and strengthen Korea's position as a global

education hub. Additionally, the government has prioritized STEM education to address skill shortages in high-demand industries, aligning academic programs with labor market needs.

Internationalization is a key strategy for Korean universities seeking to mitigate demographic decline. Policies emphasize student retention and workforce integration, encouraging international graduates to transition into Korea's labor market. Programs such as the Brain Korea 21 (BK21) initiative launched in 1999 and expanded Global Korea Scholarship (GKS) offerings started in 1967 aim to attract and support top-tier international talent. However, challenges persist, including the over-reliance on international tuition revenue and disparities in the distribution of international students, with most choosing institutions in Seoul over regional universities.

Korea's approach to higher education reform also includes strengthening university-industry collaborations to enhance research and innovation. The Glocal University 30 Project and the Revitalization of Local Universities Project which were launched in 2023 exemplify efforts to integrate universities with regional economies, fostering partnerships between academia, industry, and local governments. These initiatives highlight the importance of aligning higher education policies with economic development strategies to sustain institutional competitiveness and drive national growth.

Both Japan and Korea illustrate how higher education systems must adapt to changing demographic and economic landscapes. While AI integration offers opportunities for academic and operational improvements, universities must address ethical concerns and ensure equitable access to digital resources. Likewise, demographic decline necessitates policies that promote internationalization, lifelong learning, and industry collaboration to maintain institutional viability. By examining these developments, this study not only sheds light on the evolving higher education environments in Japan and Korea, but also highlights how the challenges they face—such as demographic decline, institutional overcapacity, and global competition—mirror those encountered by many countries worldwide. As such, the experiences and policy responses of Japan and Korea offer valuable insights and practical lessons for other higher education systems seeking to adapt to similar pressures and navigate a rapidly changing global landscape.

Major Changes in Higher Education in 2024

Digital Transformation and AI in Higher Education in Japan

Japan is at the forefront of integrating AI into higher education, leveraging technological advancements to enhance teaching, research, and administration. This transformation is driven by government initiatives, university-industry collaborations, and efforts to foster digital literacy among faculty and students. This section explores key developments up to 2024.

The Japanese government has been proactive in promoting digital literacy as a cornerstone of its educational policy. Recognizing the transformative potential of AI, the MEXT has implemented programs designed to equip both faculty and students with essential AI competencies. In July 2023, MEXT issued guidelines addressing the use of generative AI in educational settings. The ministry emphasized that submitting unedited AI-generated content does not facilitate deep learning and may constitute unintentional plagiarism. Consequently, universities have been encouraged to develop clear policies governing AI usage, ensuring that students harness these tools responsibly and ethically (Nippon, 2024). Additionally, the government's Integrated Innovation Strategy 2024 outlines priority items for the budget of the next fiscal year, focusing on a comprehensive strategy for key technologies, strengthening global collaboration, and enhancing competitiveness while ensuring safety and security in the field of AI (Japan Science and Technology Agency [JST], 2024). Furthermore, in April 2024, the Ministry of Economy, Trade and Industry (METI) released the AI Guidelines for Business Ver1.0, offering comprehensive recommendations on AI development, ethical considerations, and compliance (Ministry of Economy, Trade and Industry [METI], 2024).

Beyond academics, AI is streamlining administrative functions within Japanese universities, leading to increased efficiency and improved resource management. The Digital Agency, established in 2021, plays a pivotal role in standardizing IT systems across the government and promoting digital transformation. The agency emphasizes a "people-friendly digital transformation," aiming to improve public services and overall satisfaction through digital technologies. This approach influences administrative processes within higher education institutions, promoting the adoption of AI-driven

solutions to enhance operational efficiency (GovInsider, 2024). AI-powered chatbots and virtual assistants are increasingly used to handle routine inquiries, facilitate student services, and manage data analytics, reducing administrative burdens and improving service delivery.

Leading Japanese universities such as Keio University and the University of Tsukuba have positioned themselves at the forefront of AI-driven education and research through strategic international partnerships. In collaboration with Carnegie Mellon University (CMU), Keio University integrates AI into educational materials and pedagogical design, allowing instructors to shift their focus toward advanced discussion-based learning, hands-on training, and real-world fieldwork—thereby fostering critical thinking and innovation (Carnegie Mellon University [CMU], 2024). Meanwhile, the University of Tsukuba works closely with the University of Washington (UW) to connect cutting-edge AI research with practical applications in fields such as healthcare, robotics, climate science, and entrepreneurship. These collaborations not only promote technological advancement but also emphasize social implementation and capacity building.

Furthermore, international collaborations have expanded the scope of AI adoption across Japanese higher education. Several institutions have established AI-focused research centers in partnership with leading global universities and private enterprises. For example, the University of Tsukuba and UW have partnered with NVIDIA and Amazon to drive research, entrepreneurship, workforce development, and the social implementation of AI (University of Washington, 2024). Similarly, CMU and Keio University have launched a joint initiative to strengthen AI-focused research and workforce development between the United States and Japan (CMU, 2024). These collaborations foster knowledge exchange, encourage faculty and student mobility, and contribute to the development of advanced AI applications that address real-world challenges.

Notably, the University of Tsukuba also plays a leading role in advancing AI governance through programs that promote ethical development and responsible use of AI, underscoring the importance of aligning technological innovation with social accountability (GovCon Exec, 2024). Together, these efforts enrich Japan’s research and

innovation ecosystem while offering students access to globally connected, technology-enhanced learning environments. Japan's proactive approach highlights its ambition to establish itself as a global leader in AI-driven higher education.

AI is also being increasingly integrated into interdisciplinary research, allowing for more comprehensive solutions to complex problems. AI-assisted modeling, predictive analytics, and machine learning applications are widely adopted in fields such as medicine, environmental science, and social sciences. The University of Tokyo's Institute of Medical Science applies AI-driven genomics for disease research, including cancer and infectious diseases (University of Tokyo, 2024). Similarly, Kyoto University's Center for iPS Cell Research and Application (CiRA) has utilized AI technologies for regenerative medicine and stem cell research (Peeref, 2024). These interdisciplinary applications enhance research methodologies, automate data analysis, and streamline knowledge discovery, leading to more efficient and precise academic inquiries.
Apparently, Japan's higher education sector is undergoing rapid AI-driven transformation. Sustained collaboration among universities, industry leaders, and policymakers will be crucial in fostering an AI-enabled learning environment and positioning Japan as a leader in responsible AI integration.

Regionalized and Collaborative Internationalization of Higher Education in Korea

In recent years, the Korean government has actively promoted higher education internationalization to address a range of domestic challenges, including demographic decline, regional economic stagnation, and shortages in advanced STEM expertise. Unlike earlier phases of internationalization that emphasized mere enrollment growth, current policy initiatives focus on promoting localizing and regionalizing global engagement through collaborations between universities, local government, industrial sector, and NGOs. This approach positions international students as drivers of economic development, particularly in non-metropolitan areas, while simultaneously enhancing Korea's global academic competitiveness.

Specifically, the Korean government seeks to address three major societal challenges through higher education internationalization. The Korean government leverages higher

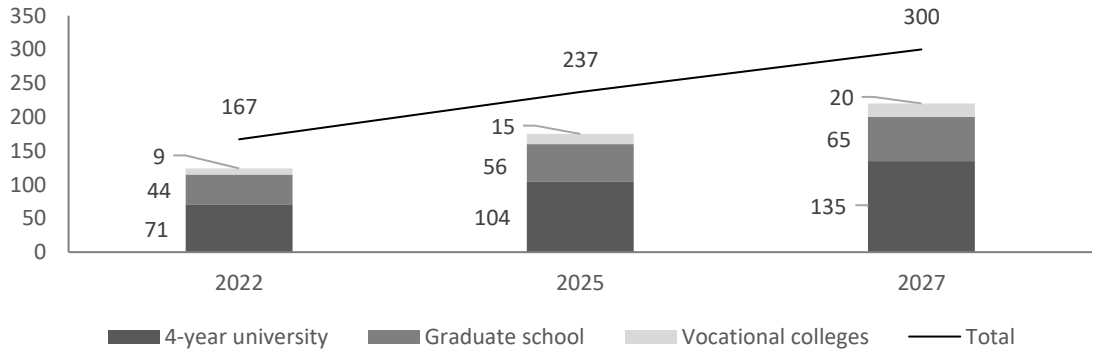
education internationalization as a strategic response to three major societal challenges: demographic decline, regional disparities, and talent retention. First, the "population cliff," driven by low birth rates, has significantly reduced enrollments, especially in regional universities. International student recruitment has become vital for sustaining institutions and stimulating local economies. Second, there has been a mismatch between Korea's demand for STEM professionals and current enrollment patterns, with most domestic and international students in humanities and social sciences. This gap is particularly severe in non-metropolitan regions, affecting local universities' capacity for research and innovation. Policies now focus on channeling more international students into STEM fields. Third, retaining international talent remains challenging, with only a small proportion of graduates have the intentions for staying in Korea for work. Furthermore, complex visa procedures and limited support hinder long-term integration.

Against this context, the Korean government launched the Study Korea 300K Project in 2023, setting an ambitious target of hosting over 300,000 international students by 2027. This initiative aims to position Korea among the top 10 global study destinations and marks a pivotal shift towards a regionalized, collaborative internationalization strategy.

Figure 1 illustrates the projected growth of international student enrollment across different educational sectors, reflecting the government's ambitious target under the Study Korea 300K Project.

The project outlines a clear framework for Korea's higher education internationalization, guiding subsequent policies and measures.

Figure 1: Projected number of tertiary international students (in thousand). Source: Ministry of Education (2023b)



Three key strategies underpin this initiative. First, it aims to stimulate regional development by attracting international students to non-metropolitan institutions. This influx helps sustain enrollments, revitalizes local economies, and fosters community engagement. International students, particularly those pursuing advanced degrees, contribute not only through tuition and living expenses but also by integrating into local labor markets and professional networks.

Second, the strategy seeks to enhance Korea's global competitiveness. Policymakers recognize that international rankings highly value metrics such as the proportion of foreign students, global faculty recruitment, and international research collaborations. By aligning institutional priorities with these indicators, Korean universities endeavored to strengthen their research capacities, elevate their international profiles, and achieve greater global recognition.

Third, the policy addresses labor shortages in critical STEM areas by redirecting a larger proportion of international students toward advanced technologies, science, and engineering disciplines. This targeted recruitment is regarded essential for filling skills gaps in sectors like semiconductor manufacturing and digital innovation, which are vital for the ongoing industrial transformation in Korea.

To achieve these strategic directions, the Korean government outlined specific implementation measures in the Study Korea 300K Project and the Ministry of Education's 2024 and 2025 annual work plans.

At the heart of these measures is the attraction and retention of international talent, which is designed to address the key societal challenges identified by the Korean government. Each challenge is met with specific strategic directions and corresponding policy measures.

To stimulate regional economic revitalization, the Korean government has implemented initiatives that leverage international student recruitment as a catalyst for regional and local development. Partnerships between universities, local governments, and industries are established to attract international students to non-metropolitan areas, fostering both

educational and economic growth. These collaborations are reinforced by tailored recruitment strategies and regional governance structures that align educational offerings with local industry needs. Internships and field training programs, developed in collaboration with local industries, enhance the practical skills required in regional labor markets, supporting long-term integration into the workforce. Specialized Global Education Zones reduce bureaucratic barriers, offering flexible admissions and comprehensive support systems, including housing assistance and job placement services, to encourage students to settle in these regions post-graduation.

To enhance Korea's global competitiveness through internationalization, the government has significantly expanded scholarship and research funding. The Global Korea Scholarship (GKS) program will see substantial growth, with new scholarships increasing from 1,334 in 2023 to 2,400 in 2024. The BK21 (Brain Korea 21) project continues to attract high-caliber international students and foster cross-border academic collaborations, supporting joint research projects, faculty exchanges, and the development of international academic networks. Additionally, the Global Educational Innovation Summit (GEIS) convenes educational leaders and experts to focus on innovative teaching methodologies, including AI-based digital textbooks. Official Development Assistance (ODA) supports digital education, infrastructure development, and teacher training projects, with the ODA budget allocation rising from 1.049 trillion KRW in 2023 to 1.298 trillion KRW in 2024. The expansion of exchange programs and global leadership initiatives, such as the Korea-Malaysia Global Leadership Youth Forum scheduled for July 2024 in Busan, further promotes student exchanges and enhances the global presence of Korean higher education.

To mitigate STEM labor shortages, targeted recruitment programs focus on attracting international students to advanced technologies, science, and engineering disciplines. Specialized master's courses in areas like digital health, semiconductor technology, and AI are supported by public funding and often include industry-linked components. Scholarships prioritize candidates willing to participate in internships and practical training within Korean companies, ensuring that academic learning translates into industry-ready skills. Partnerships between universities and industries are vital for aligning curricula with market needs, integrating theoretical knowledge with hands-on

experience through co-developed programs and joint research projects. Regulatory reforms complement these efforts by simplifying visa processes and offering flexible paths to permanent residency, particularly for PhD holders in high-demand fields.

To improve the retention of international talent, the government has introduced comprehensive support structures that facilitate the transition from education to employment and long-term settlement in Korea. Policies have been updated to reduce financial barriers and expand work opportunities, making it easier for international students to integrate into the labor market. The establishment of 'One-Stop Service' centers for international students streamlines administrative processes and enhances support mechanisms. By 2024, these centers will be expanded to key global locations, including Los Angeles, Osaka, Ho Chi Minh City, Almaty, and Tashkent. Career consulting services tailored specifically for international students will be introduced, supported by a budget allocation of 200 million KRW. Universities organize job fairs tailored to international graduates, establish mentorship programs, and facilitate apprenticeships with local companies. In addition to employment support, housing assistance, entrepreneurial resources, and cultural integration programs are provided to encourage graduates to remain in Korea, particularly in regions that stand to benefit most from a diverse, skilled workforce.

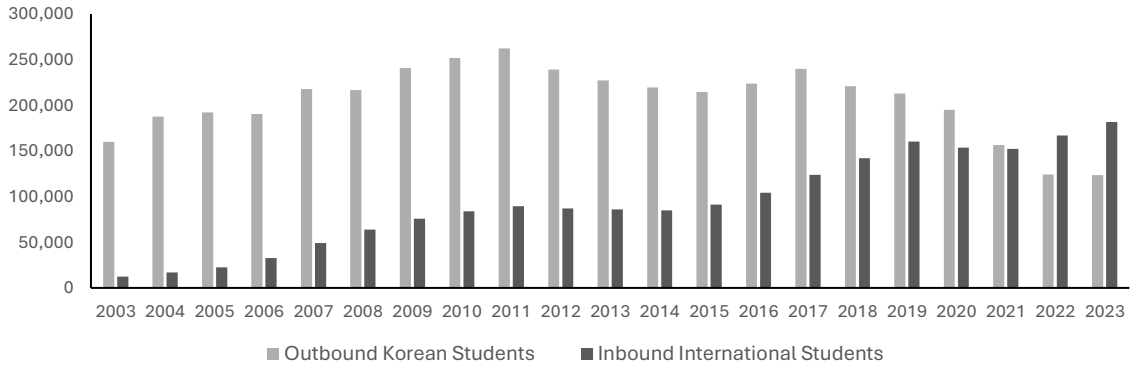
The Korean government has emphasized pan-ministerial and cross-sector governance structures as key institutional mechanisms to support internationalization. This approach involves closer collaboration between government agencies, universities, and industries to ensure policies align with both regional and national priorities. For example, local committees have been established to set enrollment targets, monitor labor market trends, and manage scholarship distribution, ensuring that international student policies are responsive to evolving economic and demographic needs.

To sustain these efforts, financial investments from national, municipal, and institutional sources support a wide range of initiatives, including infrastructure development and scholarship programs. Beyond merely increasing enrollment numbers, this comprehensive strategy seeks to integrate international students into regional economies, fostering mutual benefits between global talent and local communities. By addressing

academic, cultural, and employment needs, Korea positions itself as a competitive hub for education and innovation, reinforcing its long-term commitment to sustainable internationalization.

So far, the evolution of Korea's internationalization efforts can be observed in the long-term trends of outbound Korean students and inbound international students. Figure 2 highlights these developments, illustrating the growing significance of Korea as a destination for international education.

Figure 2: Status of outbound Korean students and inbound international students (tertiary level)



Note: Student enrollments include those in both degree programs and language training programs.

As shown in Figure 2, Korea's consistent government-driven internationalization of higher education in the past decade has led to substantial growth in international student enrollment, contributing positively to cultural diversity on campuses and stimulating local economies through tuition fees and living expenses (Byun et al., 2013). Policies like Study Korea 300K project, as an extension of the previous internationalization strategy, are anticipated to help mitigate the effects of declining domestic student populations and addressed labor shortages in specific industries, positioning Korea as an emerging global education hub (Korean Council of University Education [KCUE], 2024).

The Environment of the Changes: Demographic Decline and Labor Market Alignment

Demographic Decline in Japan

Japan is confronting significant demographic challenges, notably a declining youth population, which have profound implications for higher education institutions. In response, the Japanese government has implemented several initiatives to increase participation rates in higher education, particularly by promoting lifelong learning and encouraging non-traditional students, such as working adults, to pursue further education.

The number of 18-year-olds in the Japanese population peaked at 2.49 million in 1966 as the post–World War II baby-boom generation reached that age. The numbers picked up in the 1980s, but after reaching 2.05 million in 1992, when many of the baby boomers' children finished high school, Japan's population of 18-year-olds turned down again, shrinking by almost half to 1.18 million as of 2014. The National Institute of Population and Social Security Research predicts that this cohort will begin shrinking again from around 2018, falling below the 1 million marks to roughly 990,000 in 2031 (National Institute of Population and Social Security Research, 2024; Japan Times, 2015; MEXT, 2024a).

The rate of enrollment in higher education has consistently risen over recent decades. In the 1970s and 1980s, about 36%–37% of high school graduates went on to college (university or junior college). The rate rose to 45.2% in 1995 and 51.5% in 2005. As of 2014, the figure came to 56.7%, and if other institutions of higher education, such as specialized training colleges (vocational schools), are included, the enrollment rate goes up to 80.0% (MEXT, 2024b). Despite increasing participation, universities face a challenge as the absolute number of potential students continues to shrink.

Several higher education institutions have proactively adapted to these demographic changes through innovative strategies. For instance, Tokyo Metropolitan University has undertaken significant reforms to enhance its competitiveness and appeal to a broader range of students. In an effort to promote internationalization, the university is preparing to establish a new international faculty, aiming to open in 2028. This initiative seeks to

create an environment where students from various countries and regions can learn from each other, thereby developing global talent with diverse knowledge and advanced language skills (University Journal Online, 2024).

The University of Tokyo, Japan's premier national university, has also implemented reforms to address demographic and financial challenges. Recognizing the need for financial sustainability, the university has diversified its income sources. As of the 2021-2022 academic year, government funding constituted 35.1% of its income, self-earned income accounted for 30.5%, and external funding made up 34.4%. Additionally, the university has maintained steady tuition fees since 2005, balancing affordability with financial needs. These measures aim to ensure the institution's resilience in a changing demographic landscape (University of Tokyo, 2023).

Another significant factor behind the current predicament is the increase in the number of universities since the 1990s. Extensive changes were made to the Standards for Establishment of Universities in the 1990s, relaxing the procedures for obtaining official recognition as a university. As a result of these far-reaching reforms, the number of universities in Japan, including national, public, and private institutions, spiked from roughly 500 then to around 780 today. Given that the population of 18-year-olds has decreased by 40% since the 1990s, an increasing number of universities are now struggling with under-enrollment (MEXT, 2024a; Japan Times, 2015).

Internationalization is another critical strategy. Attracting students from abroad can compensate for the domestic shortfall and enrich the academic environment through cultural diversity. This approach involves developing English-taught programs, establishing international partnerships, and enhancing support services for international students to create a welcoming and conducive learning atmosphere (OECD, 2024).

In addition to these strategies, as mentioned in the previous sections, Japanese universities are deepening the integration of AI and digital platforms to enhance the accessibility and flexibility of higher education. This ongoing digital transformation is expected to reshape the landscape of Japanese higher education by promoting both equity and innovation in teaching and learning (MEXT, 2024c).

As Japan's demographic shifts continue to reshape the higher education sector, universities must remain agile and forward-looking. A diversified and flexible approach—encompassing lifelong learning, internationalization, and digital innovation—will be essential to ensuring institutional sustainability and relevance. Government policy, institutional reform, and industry collaboration will all play vital roles in this transformation. By embracing new models of access, finance, and pedagogy, Japanese higher education can continue to thrive in a context of demographic contraction, labor market realignment, and global competition. Ultimately, the sector's ability to remain robust, inclusive, and globally connected will determine its capacity to address both domestic needs and international challenges.

Local Community Engagement Due to Population Decline in Korea

The 2024 Higher Education Policy places a particular emphasis on addressing the challenges faced by rural universities in the context of population decline. The ongoing Glocal University 30 Project and the Revitalization of Local Universities Project serve as case studies in this regard.

In the face of a declining school-age population and a rapidly evolving industrial structure, Korea is confronted with mounting societal pressures for comprehensive transformation and reform of its university education system. However, the current academic paradigm continues to exhibit significant interdisciplinary and faculty barriers, a rigid curriculum focused on supply, and a widening gap between metropolitan and non-metropolitan regions. In an effort to bolster universities' bold and autonomous innovation, Ministry of Education select 30 universities from 2023 to 2026 to cultivate "Glocal Universities" that are globally competitive and lead innovation by connecting local industry and society. This initiative is underpinned by a strategy of selection and focus, involving external support that transcends the conventional boundaries between government ministries and local governments. Additionally, it encompasses innovation in the structure and operation of universities, with the objective of empowering them to contribute to their respective communities and fulfill their role as nexuses for industry-academia-government cooperation. A total of ten universities were selected in 2023, and an additional ten were selected in 2024. Each of these selected universities will receive

approximately 100 billion won over a five-year period. In the year 2024, a total of 109 universities submitted applications, 65 of which were deemed eligible. After following an initial screening process (20 preliminarily designated), 10 universities were selected as recipients of innovation models (MOE, 2023a). These selected universities were tasked with the implementation of innovative initiatives and major objectives. The subsequent performance of these universities was subjected to evaluation. To illustrate this process, consider the case of Handong University, which has delineated three major tasks under the innovation direction of "building a global Holistic Intelligence (HI) platform." These include the realization of a future university HI education model, the completion of a student self-selection major system, and the development of an innovative semester system. Additionally, the university aims to establish a convergence enterprise innovation park that integrates future industry, education, and housing (MOE, 2024b).

The joint crisis of regional and local universities is intensifying due to the escalating risk of regional attrition and the challenges associated with recruiting non-metropolitan universities, given the population concentration in metropolitan areas. The educational environment in private universities in non-metropolitan areas is particularly challenging, as they face difficulties in securing competitive enrollment. To address these issues, it is essential to foster specialized human resources that can meet the needs of local businesses and students, thereby encouraging local talents to work and settle in the region. To this end, the Local University Revitalization Project was initiated for 66 private universities in non-capital regions from 2023 to 2024, with a budget of KRW 237.5 billion in 2024 (MOE, 2024a). The project's primary objectives are as follows: 1) the establishment of governance structures for local university revitalization initiatives, 2) the promotion of specialization to enhance university competitiveness, and 3) the cultivation of specialized talents aligned with local and student demand.

In order to shift the paradigm of university support to be led by local governments along with the Glocal University 30 Project, the Ministry of Education will delegate and transfer the authority of university support from the Ministry of Education to local governments from 2025, and fully implement the Regional Innovation System & Education (RISE), where local governments, universities, and innovation organizations establish and implement regionally customized strategies. In addition, in order to link the Revitalization

of Local Universities, which ended in 2024, to the RISE project, local governments are considering redesigning it in a way that links business performance and best practices to regional development in consultation with universities and companies (MOE, 2024a).

Analysis of Risks and Opportunities

Risks

Japan's higher education sector faces compounded challenges stemming from demographic decline and the rapid integration of artificial intelligence (AI). While AI presents opportunities to enhance teaching, learning, and research, it also introduces serious concerns related to governance, equity, ethics, and institutional capacity.

The integration of AI into education raises critical issues around data privacy, algorithmic bias, and the responsible use of student data. Without clear governance frameworks, universities risk undermining public trust and widening inequality. Additionally, many educators remain unfamiliar with AI technologies, requiring continuous professional development and institutional support. Financial and infrastructural constraints also present barriers, particularly for smaller institutions that may lack the resources to implement advanced AI systems (AI Expert Network, 2025).

Generative AI technologies, such as ChatGPT, further complicate the landscape by challenging traditional teaching roles and pedagogical values. Current AI discourses in Japan are often centered on employability and individual performance, which may clash with collectivist and value-based elements of Japan's educational philosophy. Moreover, the integration of AI may unintentionally increase the workload for already overburdened faculty, undermining efforts to reform academic labor conditions (Legese, 2024).

Compounding these technological challenges is the long-term demographic decline that has reshaped Japan's higher education system. With university-age cohorts shrinking and enrollment quotas increasingly unmet—particularly in private institutions—many universities face growing financial insecurity. Rather than repeating earlier demographic statistics, it is important here to stress that these structural constraints limit the capacity

of institutions to invest in digital innovation, attract talent, and maintain international competitiveness (Hechinger Report, 2021).

Addressing these intersecting risks requires coordinated action. National and institutional strategies should prioritize the development of robust AI governance policies, equitable access to technological infrastructure, and sustainable models of funding in light of demographic pressures. Without such reforms, Japan's higher education system may face mounting difficulties in ensuring quality, equity, and resilience in the face of global technological transformation.

Compared to Japan, the most significant challenge confronting Korean higher education in 2024 pertains to the survival of universities in the face of a declining school-age population. This phenomenon is particularly salient in the context of the impending obsolescence of local universities.

To address this challenge, a collaborative effort among the government, academic institutions, and local communities is imperative. In response, the government is implementing various short- and long-term policies; however, these measures are insufficient to provide a comprehensive solution. Consequently, universities are confronted with the challenge of formulating strategic plans in accordance with the existing projects. Despite the considerable public funds allocated to various projects, there is a paucity of empirical analysis evaluating their effectiveness. The government's indirect control over universities through financial support programs is particularly limited. While the government endorses universities' strategic approaches from a bottom-up perspective, the primary concern pertains to the extent of autonomy that can be granted to these institutions while they are bound by the government's policies in terms of selection and evaluation.

Against this backdrop, the Korean government has extended its policy focus outward, viewing internationalization and the expansion of international student enrollment as strategic measures to counteract the threats posed by demographic decline and the economic stagnation of regional areas. However, this instrumental, economically driven approach to internationalizing Korea's higher education system presents a range of

interconnected risks. Current approach risk commodifying education and treating international students primarily as financial assets or sources of labor rather than as learners and global talents (Han & Choi, 2024; Kim, 2023). This commodification poses a serious threat to academic integrity and educational standards, potentially undermining the global reputation of Korean universities.

Furthermore, international students are increasingly funneled into low-wage, labor-intensive sectors such as manufacturing, caregiving, and the service industry to address domestic labor shortages. This shift not only exposes them to precarious and often unethical working conditions but also detracts from their primary purpose of academic and professional development, raising concerns about student exploitation (Kim, 2023).

Another persistent issue is the misalignment between policy objectives and the academic or career aspirations of international students. While the policies focus on short-term economic gains and workforce supplementation, they often fail to meet students' needs for high-quality education and professional growth (Lee & Jo, 2024). This disconnect has contributed to rising dropout rates and widespread dissatisfaction, reflecting negatively on institutional effectiveness and universities' ability to foster supportive academic environments (Jung & Kim, 2018; Jiynbai, 2024).

Aggressive recruitment strategies, especially in regional universities, have strained educational quality and support systems. Many institutions lack sufficient resources to provide adequate academic, social, and linguistic integration, while the lowering of language proficiency requirements to boost enrollment risks further deterioration of academic standards and the international reputation of Korean degrees (KCUE, 2024; Oh, 2024).

Additionally, the geographical concentration of international students in metropolitan areas like Seoul exacerbates regional disparities. Urban universities continue to attract the majority of international students due to better resources and job opportunities, leaving rural institutions underfunded and struggling with retention—thereby failing to achieve the intended goal of regional revitalization (Han & Choi, 2024).

Beyond the campus, the growing presence of international students raises broader societal concerns. The readiness of local communities to accommodate a more diverse population—both socially and culturally—remains uncertain (Li et al., 2025). Building a truly multicultural society requires substantial adjustments in public services, social infrastructure, and community attitudes toward diversity. As Korea expands its internationalization efforts, successfully adapting to this multicultural reality will remain a significant challenge extending well beyond the realm of higher education policy.

In addition to these structural challenges, external factors further threaten the sustainability of Korea's internationalization efforts. Geopolitical tensions and diplomatic disputes can disrupt student flows, particularly from key source countries (e.g., China). Simultaneously, the financial strain caused by demographic decline has increased universities' reliance on international tuition revenue to sustain operations. This growing dependence on external enrollment creates a fragile financial model, leaving institutions vulnerable to fluctuations in international student numbers, which could severely impact their long-term stability.

Opportunities

Japan's higher education sector faces significant challenges due to demographic decline and the integration of AI. However, these challenges also present unique opportunities to revitalize and transform the educational landscape.

The integration of AI into higher education offers avenues to enhance learning experiences and operational efficiency. AI-driven tools can provide personalized learning pathways, adapting to individual student needs and promoting more effective knowledge acquisition. For instance, AI-powered platforms can analyze student performance data to offer customized resources and support, thereby improving academic outcomes (The PIE News, 2024). Moreover, AI can automate administrative tasks, allowing educators to focus more on teaching and research activities. Collaborations between U.S. and Japanese universities, supported by significant private sector investments, underscore the potential of AI in advancing educational methodologies and fostering innovation (The PIE News, 2024).

The convergence of AI and higher education fosters opportunities for interdisciplinary research and innovation. By integrating AI technologies into various academic fields, universities can drive advancements in areas such as healthcare, engineering, and social sciences. Collaborative research initiatives, supported by both governmental and private entities, can lead to groundbreaking discoveries and applications. These efforts not only elevate the global standing of Japanese institutions but also contribute to societal progress and economic development (International Higher Education, 2024).

Japan's declining youth population necessitates a strategic shift towards internationalization to sustain university enrollments and cultural diversity. By attracting international students, Japanese universities can mitigate the impact of domestic demographic decline. This approach not only fills enrollment gaps but also enriches the academic environment with diverse perspectives (International Higher Education, 2024). To achieve this, institutions are enhancing English-taught programs, simplifying admission processes for foreign students, and establishing global partnerships. Such measures make Japanese higher education more accessible and appealing to a global audience, thereby offsetting the challenges posed by a shrinking domestic student base (International Higher Education, 2024).

The demographic shift also presents an opportunity to redefine the target demographic for higher education. With a decreasing number of traditional college-age students, universities can expand their focus to include adult learners and professionals seeking to upskill or reskill. AI can play a pivotal role in this transformation by offering flexible, personalized learning solutions that cater to the needs of non-traditional students. Online courses, virtual simulations, and AI-driven assessments can facilitate continuous education, aligning academic offerings with the evolving demands of the labor market (The PIE News, 2024). This approach not only broadens the student base but also contributes to economic growth by enhancing the skills of the workforce.

While demographic decline and the integration of AI pose challenges to Japan's higher education sector, they also offer unique opportunities for transformation. By embracing AI technologies, internationalizing education, promoting lifelong learning, and fostering interdisciplinary research, Japanese universities can navigate these challenges effectively.

Proactive adaptation to these evolving dynamics will enable institutions to enhance educational quality, sustain enrollment, and contribute meaningfully to both national and global communities.

From the perspective of Korea, discussions on the merger and reform of universities, which began in 2005 as a response to the decline in the school-age population, have stalled. Although the merger of universities has not been effective under voluntary conditions, there has been notable progress, as evidenced by the submission of consolidation plans by numerous universities and the subsequent efforts to implement the Glocal University 30 Project and the Revitalization of Local Universities Project. This development is particularly noteworthy in addressing the issue of educational imbalance and the pursuit of qualitative enhancement (NRF, 2024). Moreover, it facilitates the implementation of university administrative efficiency from the perspective of integration.

In the realm of internationalization, policy efforts have increasingly emphasized diversification of student source countries as a strategic response to mitigate the risks associated with over-reliance on a single market, particularly China. This shift enhances the resilience of Korean higher education institutions to geopolitical uncertainties while reinforcing the sustainability of international student mobility. Additionally, the transition from a recruitment-driven model to a comprehensive approach integrating student retention and post-graduation pathways marks a significant strategic shift. Despite ongoing implementation challenges, the alignment of recruitment, academic progression, and labor market integration constitutes a more holistic model for international talent development. This shift is particularly relevant in the context of national economic growth and regional revitalization, as it aims to create sustainable linkages between higher education institutions and the broader labor market.

Furthermore, engagement with regional and local communities has emerged as a critical dimension in both domestic and internationalization strategies. The increasing emphasis on fostering stronger university-community linkages reflects a recognition that higher education institutions play a pivotal role in regional innovation and economic development. By strengthening partnerships with local governments, industries, and other

social sectors, universities are not only enhancing their own institutional resilience but also contributing to the broader societal objective of sustainable regional development. The establishment of coordinated governance structures that integrate higher education with regional economic and social needs underscores the evolving role of universities as key stakeholders in national and local development strategies.

Lessons Learned from the Changes in Higher Education Policies of Japan and Korea

In light of the preceding analysis of Japan and Korea's higher education systems, it becomes evident that both countries are grappling with overlapping yet distinct challenges shaped by demographic contraction, technological advancement, and the imperatives of internationalization. Rather than revisiting country-specific narratives, this final section distills a series of cross-national insights and strategic responses that can inform policy and institutional reforms globally. These lessons not only reflect national priorities but also capture the broader dilemmas facing higher education systems in the 21st century.

Navigating the Digital Turn: AI Integration as a Double-Edged Sword

To begin with, the integration of artificial intelligence (AI) and digital technologies has emerged as a central pillar in both Japan and Korea's responses to structural pressures. Governments and universities in both countries have embraced AI to enhance teaching, streamline administration, and drive research innovation. From Japan's Learning and Education Analytics Framework (LEAF) to Korea's initiatives promoting AI-based textbooks and interdisciplinary programs, the digital transformation of higher education is well underway.

However, this shift is not without complex challenges. Both countries have recognized that technology is not a panacea. The implementation of AI tools must be accompanied by clear governance structures that address issues of data privacy, algorithmic bias, and transparency. For example, concerns have emerged in Japan regarding the ethical implications of generative AI tools like ChatGPT and their potential to undermine traditional educational values centered on collective learning and holistic development.

Similarly, in Korea, educators have expressed concerns about the rapid pace of digitalization outstripping pedagogical preparedness and institutional capacity.

Thus, a critical lesson is that AI integration must be pursued strategically and ethically, with an emphasis on human-centered design, faculty development, and ongoing evaluation. Countries aiming to harness the benefits of AI in education must avoid technocratic solutions and instead ground their strategies in educational philosophy, stakeholder engagement, and institutional readiness.

Turning Demographic Decline into a Driver of Innovation

Another significant area of convergence is how Japan and Korea are responding to population decline, particularly the shrinking number of university-age youth. Both countries have witnessed sharp declines in the 18–22 age cohort, leading to intensified competition among institutions and under-enrollment at many regional or private universities.

Yet rather than viewing this demographic trend solely as a threat, both systems are beginning to reframe it as a catalyst for transformation. Japanese universities, for example, are expanding their reach to non-traditional learners—such as adult students and working professionals—through flexible learning pathways, online programs, and AI-supported instruction. Similarly, Korea's national projects such as Glocal University and RISE are pushing universities to reorient themselves as engines of local innovation and sustainable development, particularly in non-metropolitan areas.

The key takeaway is that demographic change can incentivize structural reform. When institutions confront enrollment pressures, they are often compelled to diversify student populations, modernize curricula, and rethink their value propositions. In this regard, Japan and Korea offer models of how demographic adversity can fuel strategic renewal—provided there is adequate policy support and institutional agility.

Rethinking Internationalization Beyond Recruitment Numbers

In both cases, internationalization has become a vital policy tool for counterbalancing domestic demographic decline and enhancing global competitiveness. However, while

earlier phases of internationalization often emphasized quantitative expansion—namely, increasing the number of inbound students—recent trends reflect a more qualitative turn in strategy.

Japan has prioritized global research collaborations and the development of English-medium programs, while Korea's Study Korea 300K project focuses on international talent retention, regional distribution, and integration into the labor market. Yet challenges persist: overly instrumental approaches risk commodifying education and treating international students primarily as revenue sources or labor solutions, undermining educational integrity and student satisfaction.

Hence, a critical insight is that effective internationalization requires depth, not just numbers. Recruitment strategies must be coupled with support systems for academic integration, post-graduation employment, and long-term settlement. Moreover, both countries illustrate the importance of aligning internationalization with domestic priorities—whether that is revitalizing local communities, filling STEM labor gaps, or fostering cross-border research ecosystems.

Universities as Local and Global Anchors

A fourth area of convergence is the redefinition of the university's societal role. In both Japan and Korea, universities are no longer viewed solely as academic institutions but are increasingly expected to function as innovation hubs, regional anchors, and economic drivers. Korea's Glocal University project and Japan's emphasis on interdisciplinary research centers (often supported by global partnerships) reveal a shared shift toward community-engaged, impact-oriented higher education.

This expanded role necessitates stronger collaboration between universities, industries, local governments, and civic actors. Importantly, it also requires institutions to embed themselves within both local ecosystems and global networks. In this way, universities become conduits for knowledge transfer, workforce development, and societal transformation, blurring traditional boundaries between academia and the broader world.

The lesson here is that institutional sustainability hinges on multi-level engagement. National policies must support place-based innovation while incentivizing global collaboration. Institutions, in turn, must develop the organizational capacity to operate in both domains simultaneously.

Balancing Autonomy and Coordination in System Governance

Lastly, the governance dynamics in both countries illustrate a tension between centralized steering and institutional autonomy. Korea's top-down frameworks for internationalization and regional development contrast with its rhetorical support for bottom-up innovation. Japan, too, has relied heavily on ministry-driven policies to steer AI adoption and international collaboration, even as it promotes institutional differentiation.

This raises a broader question of how to design governance systems that enable responsiveness without micromanagement. Policymakers must resist the urge to impose overly rigid frameworks, while institutions must demonstrate accountability and strategic alignment. Achieving this balance is particularly important in periods of systemic transition, when experimentation and adaptation are essential.

Governance models that enable co-creation of strategy—involving universities, governments, industries, and communities—are more likely to generate sustainable and context-sensitive solutions. This is especially true for cross-cutting challenges like AI ethics, international student mobility, and demographic decline, where no single actor holds all the levers of change.

Conclusion: Toward Resilient and Adaptive Higher Education Systems

Taken together, the experiences of Japan and Korea provide complementary roadmaps for navigating the uncertainties of higher education in an age of disruption. Both countries illustrate how challenges such as AI integration and demographic decline can serve as inflection points for systemic reform—provided that responses are coordinated, inclusive, and forward-looking.

Several overarching principles emerge. First, technological adoption must be aligned with ethical values, cultural norms, and pedagogical goals, ensuring that innovation enhances rather than undermines educational quality. Second, demographic shifts should prompt—not delay—experimentation with new learning models, student profiles, and funding structures. Third, internationalization should prioritize integration and long-term engagement over short-term recruitment metrics. Fourth, universities must deepen both their local roots and global linkages, serving as bridges between communities and the wider world. Finally, policy frameworks must balance flexibility with guidance, enabling institutions to navigate complexity with creativity and accountability.

For higher education systems worldwide, these lessons are increasingly relevant. As demographic pressures, technological upheavals, and geopolitical shifts reshape the global educational landscape, the ability to adapt proactively—rather than react passively—will determine the long-term vitality and relevance of universities. The Japanese and Korean cases remind us that while challenges are inevitable, they also open pathways to renewal.

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