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Higher Education Forum

Volume 23, March 2026

Contents

Navigating the Politics of Disruptions in Higher Education
Fazal Rizvi ····· 1

Leadership Competency, Styles and Contexts of Higher Education Institutions in Korea and Taiwan
Jung Cheol Shin, Robin Jung-Cheng Chen and Sophia Shi-Huei Ho ····· 17

The Rhetoric of Research-Informed Teaching: Unpacking ambitions and assumptions in the UK's teaching excellence framework
David Spendlove ····· 39

Geopolitics and International Higher Education: Concepts, knowledge diplomacy and security policies, and future agenda
Lizhou Wang and Hans de Wit ····· 63

A Mixed-Methods Study of the Impact of Self-Efficacy on Self-Regulated Learning Strategies among Vietnamese Undergraduates Enrolled in a Research Methods Course
Nga Thi Tuyet Phan ····· 81

Unraveling the New Factors Influencing Public Pension Knowledge: Findings from Japanese university students
Tomotaka Hirao ·····107

Study Motivations, Academic Experiences, and Career Aspirations of International Students in China
Xian Chen and Kana Yoshida ·····131

Intention to Adopt Distance Education Mediated by Satisfaction: Structural equation modelling in Ecuadorian universities
Patricia Hernández-Medina, Diego Lara-Haro, Darío Díaz-Muñoz and María Paublini- Hernández ·····159

Reconsidering Internationalisation: Navigating the challenges of Chinese private higher education institutions
Jie Ding and Jacob Mlynarski ·····183

Cumulative Author Index, Vol. 1-23 ····· 209

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Navigating the Politics of Disruptions in Higher Education

Fazal Rizvi*

Introduction

In recent years, the idea of disruptions has been widely used to highlight the ways in major social, political, economic and technological transformations are reshaping the spaces in which higher education institutions (HEIs) operate. These transformations are disrupting the ways in which the purposes and governance of higher education have traditionally been conceptualized. For example, the economic and political reconfigurations associated with the shifting geopolitics are placing new demands on HEIs to meet societal expectations that are often ambiguous, indistinct and conflicting (Rizvi, 2017). HEIs are expected to address issues of climate change and environmental sustainability, while at the same time prepare students to participate in a highly consumerist global economy (Iyengar & Caman, 2023). Developments in new technologies and artificial intelligence have transformed modes of communication and are challenging HEIs to rethink the ways in which knowledge is created, validated, utilized, and disseminated (Selwyn, 2022). At the same time, we are witnessing major changes in youth cultures, the ways in which the young engage with a world that is irrefutably more complex, uncertain and confusing.

Some of the disruptions facing HEIs are banal, routine and regular while others are poignant and sudden, highly consequential and unprecedented. In the case of Covid-19, for example, disruptions were extensive and largely unforeseen. The pandemic disrupted most aspects of higher education, not only the normal operations of HEIs, but also their planning processes (Neuwirth, Jovik, & Mukherji, 2021). Well laid plans had to be rethought under conditions that made it difficult to imagine returning to 'the normal'. Indeed, it was widely suggested that HEIs now faced a 'new normal' characterised by higher levels of complexity, volatility and unpredictability. It was argued moreover that while Covid-19 might have represented an extreme case, disruptions might have become a permanent feature of higher education. It was necessary therefore to anticipate the future of HEIs with an expectation that all policies and priorities --no matter how clearly stated. coherent and robust --will be disrupted to a varying degree by unexpected developments, with the potential to unsettle even the best laid plans.

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This paper examines some of the ways in which the concept of disruption has been used and theorised in recent years, what are assumed to be its sources, and the terms in which it is considered to be different from changes that are ordinary and familiar. It reviews an account of some of the disruptions that HEIs currently faces and argue that the meaning and significance of disruptions vary across contexts. Often their characterization is used discursively to promote ideological interests that are also contextually specific. In this way, the concept of disruption is inherently political. This conceptual discussion is helpful in assessing the veracity and utility of the various approaches to navigating disruptions that have been proposed in recent years, including theories of disruptive innovation (Christensen, 1997), and anticipatory governance (Kallo & Valimaa, 2025). It is contended that most of these approaches are grounded in the classical theories of Joseph Schumpeter (2008) and assume assumptions underpinning the logic of market economy and society. They are either top-down technocratic or autocratic. An alternative to these ways of thinking about disruptions is to consider the importance of cultivating democratic spaces in which the meaning, significance and politics of disruptions can be understood and navigated.

Identifying Disruptions

In recent years, numerous attempts have been made to catalogue the disruptions that systems of higher education currently face. One such attempt has been associated with the Australian government's recent policy report 'Australian Universities Accord' (2024), As is normally the case with government reports in liberal democracies, the report's findings and recommendations were developed through wide-ranging consultations and public submissions. Indeed, the idea of the Accord itself implies a broad consensus built upon the diverse views of the stakeholders. Most of the forty-seven recommendations of this report focus on the range of skills needed to meet the demands of the changing economy, and how such skills could be developed equitably. They suggest ways of improving the quality, accessibility, affordability, and sustainability of higher education in Australia over the next decade.

This paper does not analyse the report's recommendations as such but focus instead on the submissions which were used to develop them. In these submissions, the idea of disruptions was widely invoked, with suggestions made on how best to navigate them. The extensive use of the concept of disruptions was perhaps not surprising, since the consultations took place within the recent memory of Covid-19 that had led universities around the world to reconsider their business and delivery models. It is also worth noting that submissions to the Accord Exercise were made against the backdrop of the anxieties caused by the release of ChatGPT, a generative artificial intelligence (AI) tool with the potential to radically overhaul the ways in which knowledge is created, consumed and disseminated. In 2023, developments around AI had given rise to an intense public debate about the future of knowledge work and systems of higher education more generally (Kaplan, 2023).

While many of the submissions to the Accord Exercise focused on issues regarding artificial intelligence, several other disruptions facing higher education not only in Australia but globally were also highlighted. Most helpfully, a report produced by a consultant to the Accord Exercise, Ryan Young (2023), provided an overview analysis of these submissions. He noted that "There are a range of broader dynamics, repeated across the globe, that show we are living through a sustained period of change. Technology, economic models, geopolitics and environmental factors are all calling into question many of the assumptions we have built our organisations and systems on" (Young, 2023, p. 2). He insisted moreover that a better understanding of these disruptions was essential for imagining the future universities will need to navigate. How they should prepare for disruptions is no longer an option but a necessity, he maintained.

According to Young, across the range of ongoing forces that would together disrupt Australian universities to varying degree, six strong themes could be identified in the submissions. First, it was widely acknowledged that while AI and the digital environment would generate possibilities of democratization of knowledge, they would also create major risks for the very survival of universities in their current form. The ability of AI to summarise, interpret and produce knowledge would challenge HEIs to compete with other sources of knowledge, jeopardizing not only their pedagogic but also their business models. This would rapidly take the information economy further away from being a purely human enterprise, to becoming a hybrid human-machine activity. Second, and in ways that are equally serious, the submissions highlighted how climate change and environmental crises could have a direct impact on universities and other educational institutions, since most of their built environments and infrastructure assumed a stable climate in their design and implementation.

Third, the submissions suggested that the broader societal and demographic changes were likely to disrupt universities with the profile of students and staff changing the patterns of group identity, expectations and ambitions across society. Fourth, following a period of relative geopolitical and strategic stability, there was every indication that geopolitical tensions and rivalries would grow over the next few decades, disrupting universities in many unpredictable ways. Fifth, the changing learning context would be disrupted not only by AI but also by other social and economic transformations demanding changes in the range and type of educational offerings and the ways research was financed and carried out. And finally, these transformations would disrupt the governance and funding models to which universities have become used, especially as these models are based on the assumptions of predictable patterns of political steering and bureaucratic control.

Young concluded that the combination of these factors acting on broader society --digital, geo-political, societal and environmental --were forcing changes across all organisations but have serious implications for higher education. The overwhelming message in the submissions was that universities would need to think and act differently, experiment and try new things. They would need to find ways to lead the disruption rather than be disrupted. Young (2023, p. 14) feared however that the capacity for Australian universities to lead the disruption will be "impeded by a range of factors, including overly

bureaucratic system regulation, incentives in the education system that support a business-as-usual approach, one size fits all mindsets and established cultures and ways of doing things". What was needed, he insisted, were attempts by Australian system of higher education to create more space for variety, heterogeneity and experimentation to reimagine themselves.

Young's analysis and suggestions are broadly shared by recent academic literature in higher education. In recent years, much of the focus of discussions around disruptions facing higher education has been on digital technologies. Even before the emergence of ChatGPT, researchers had begun to note the disruptive impact of digital technologies. Moodie (2016), for example, had suggested that the information revolution had the potential to affect major changes in in the transmission and dissemination of disciplinary knowledge through the interaction of three factors: financial, technological, and physical resources; the nature, structure and level of knowledge; and the methods available for managing knowledge. Kaplan (2023) had shown how these changes would be accelerated by developments in artificial intelligence. According to Postiglione (2019), "the rapid emergence of technological innovations such as artificial intelligence, big data and algorithms, facial recognition, biosensors, augmented reality, gamification, blockchains, cloud computing, and other yet to be created innovations" were causing disruptions that universities could not afford to ignore – they represented a "coming crunch" that would require universities to rethink and realign their core mission.

A great deal has also been written on other disruptions identified by Young. For example, climate change is widely viewed as a major disruptive force the full impact of which has yet to be felt. According to Filho et al (2023), climate change will place major new demands for innovative modes of research and teaching in HEIs. Based on interviews with leading higher education scholars in the UK, Rowsell (2025) has concluded that geopolitical disruptions will mean higher education will look very different in five years' time, forcing universities into major transformations. Research by the OECD (2024) has shown how disruptions associated with demographic shifts are already posing a major challenge to HEIs, demanding attempts to balance accessibility with resource efficiency, requiring strategic adjustments in teacher deployment and infrastructure. According to Lundberg et al. (2025), the traditional assumptions regarding learning contexts in higher education are becoming disrupted, requiring new ways of thinking about designing and enacting teaching programs, assessing the performance of students, and providing them support. Wells and Ingeley (2019) have shown how, together, these disruptions require us to rethink issues of higher education funding and governance, not least in the context of the emergence of new actors in a space in which universities effectively had a monopoly.

Of course, the catalogue of disruptions provided by Young, even as it is supported by the academic and corporate literature, is not comprehensive. No such catalogue can be. Every account of disruptions is highly selective. There are numerous other disruptions of enormous significance that have not been enumerated or have attracted a similar amount of attention by higher education scholars and institutions. For example, the list of six disruptions provided by Young does not mention the emerging contradictions of global capitalism and the growing levels of inequalities both within and across national borders. It

does not recognize how these disruptions are likely to undermine the financial stability of universities, along with their relationship to the state. Understated also are the difficult economic conditions that many students now face, since investments they make in their higher education through fees and loans no longer guarantee them employment, or higher levels of income. The myth of meritocracy has been well and truly exploded (Lauder, 2022).

Nor does the list provided by Young and others sufficiently interrogates the ways in which the liberal global order and institutions established after the Second World War have become exhausted, with every indication that the rapid rise of Asia will transform the conditions under which universities operate. Still to be realised are the attacks on multilateralism by right-wing forces around the world that are undermining the normative discourses of higher education regarding transnational collaboration and cooperation (Marginson, 2025). Relatedly, the rise of populism and nationalism has the potential of becoming a major disruptive force, weakening the autonomy of universities, their capacity to teach and research topics viewed unfavourably by authoritarian states (Brogger, 2023). There are other disruptions facing higher education at the behest of multinational corporations, especially those driven by large tech companies that are no longer reluctant to interfere in defining teaching and research priorities more likely to serve their commercial interests. The questions arise then as to why and how some disruptions are identified, named as such, treated as significant, while others are either overlooked or sidelined -- and indeed how certain characterization of disruptions become pronounced, and whose interests do such pronouncements serve.

Theorizing Disruption

Theoretically, the concept of disruption denotes change, a departure from an existing state of affairs. Change is contrasted with stability which suggests a system's tendency to remain the same over time. Change signifies a transformation into something different. Analysing the processes of change involves identifying what stays the same and what changes within a system, understanding the rates and mechanisms behind the processes of change. However, in institutional life, it needs to be noted, change is constant and ubiquitous. It is ever-present in human configurations, and that therefore not all instances of change can be characterized as disruption. Only those instances that are assumed to involve significant and meaningful departure from the normal are portrayed as disruptive. The idea of disruption therefore implies a measure of exceptionality, as well as gravity. At the same time, minor changes can be portrayed as disruptive, representing a strategic opportunity for interventions which might not otherwise be justifiable.

What constitutes disruption is never self-evident: it depends on the aims of an institution and its constitutive requirements, both real and imagined. Disruption is thus a normative concept, the nature, extent and intensity can be characterized in various different ways. Some disruptions are negligible and do not disturb the normal functioning of institutional life, while other disruptions can be serious,

requiring urgent attention. So, for example, a specific development in artificial intelligence, such as ChatGPT, could be regarded as disruptive, but once it has been accommodated and normalized within a system, its use can no longer be regarded as disruptive. The impact of climate change, on the other hand, could arguably be disruptive in an ongoing and unending manner. Identifying an occurrence as disruptive thus requires an analysis of not only of what has changed but also the ways in which the change is significant.

The idea of disruptions thus implies a departure from the norms of a presumed steady state. It suggests destabilization of institutional patterns or routines. As I have noted earlier, no catalogue of disruptions facing higher education can therefore be self-evident or indeed complete. Furthermore, no matter how empirically salient a disruption might be, its characterization is always politically framed, potentially driven by ideological interests. To provide a theoretical account of disruptions is to specify how disruption differs from regular change, and how it represents significant change and why it is important to recognize its gravity. Knowledge about disruptions is not only about describing what happens, but also how it happens and how it departs from the presumed normal.

Since the discursive practices of naming and framing disruptions are political, they are also highly contested, not least because how disruptions are recognized and characterised politically shapes the ways in which they can be addressed or should be navigated. In this way, HEIs confront the task of making sense of the politics of disruption: how its meaning, significance and gravity are crafted and understood. Not surprisingly therefore, theoretically, the idea of disruptions has been approached differently, based on sociological and political assumptions regarding the social constitution of institutions such as higher education. These approaches inevitably shape the suggestions about ways of addressing disruptions. In what follows, I outline three such approaches.

A functionalist understanding of disruptions assumes that institutions are best viewed as a complex system with interconnected parts—like institutions, norms, and roles—that work together to promote stability and solidarity. Disruptions are viewed as imbalances in a social system that need to be adjusted to reinstate equilibrium, much like a body needing to maintain homeostasis (Layder, 2005). Disruption in one part of an institution necessitates adjustments in others to preserve overall stability and equilibrium, with unexpected events acting as catalysts for social change with the ultimate function of reinforcing stability by adjusting norms. This analysis of disruptions is arguably deeply conservative since it focuses on the preserving the *status quo*, ensuing that equilibrium is maintained, and that any attempt to navigate it does not challenge or weaken the interests of the powerful (Giddens, 1984).

An understanding of disruptions in a more positive light is based on Joseph Schumpeter's account of creative destruction (McCraw, 2010). It views disruption as necessary to drive the processes of innovation, dismantling long-standing structures, making way for new ones. Viewed as an opportunity, a disruption is regarded as helpful in encouraging competition and introducing new norms of practice. It ultimately fosters long-term economic growth and improved productivity. Entrepreneurs and innovators are assumed to be crucial in this process, driving competition and introducing new products.

In recent years, the idea of creative destruction has been applied to numerous industries --such as media, technology and entertainment, retail, finance and energy and so on --as a way of challenging the *status quo* and the prevailing norms. While Schumpeter did not himself addressed issues of higher education, his ideas have been applied widely to discuss the idea of "entrepreneurial university," social enterprise within academic settings, and the need for HE to foster the innovative spirit crucial for a dynamic economy (Pinheiro, 2016).

Another approach to understanding the politics of disruptions in higher education highlights its role in the transformation of values (OES, 2024). This critical approach examines the ways disruptions are identified, characterised and navigated in ways that serve various political and economic interests. Its focus is on how the configurations and inequalities of power allow a disruption to be used discursively to promote certain ideological interests. In this way, while it is recognized that disruptions can threaten HEIs, it is argued also that they can be seen as opportunities to realize certain ideological preferences. This approach suggests that when disruption occurs, the changes influence where and how value is created, retained or destroyed. From this critical perspective it is important therefore to understand how values are currently embedded in systems of higher education, even if they are not stated overtly, and how disruptions have the potential to reshape them. Disruptions reflect changes that necessitates responses, but it is not always possible to identify the precise ways in which to respond to them optimally, since the idea of optimal response is itself likely to be patchily defined, politically framed and highly contested. What the discussion in this section shows is that there are numerous ways in which the politics of disruptions can be and has been approached.

Navigating Disruptions

Perhaps the most common approach to navigating disruptions in higher education involves attempts to secure the steady state -- the *status quo*, by doing only that which prevents the implosion of the system. Piecemeal efforts are therefore made to paper over the cracks, to ensure the survival of the institution around the established norms. Indeed, the importance attached to the idea of organizational sustainability (Nieto et al., 2024) can be understood in this manner. This functionalist approach invites the preservation of traditions, norms and customary practices to ensure that the institution is not destabilised and can continue to deliver its core mission. No matter how minor or major the disruption, the focus is on the retrieval and recovery of what is assumed to be the normal. The changes which are made are thus often minimal.

This is the case, for example, with how the disruptions caused by Covid-19 was navigated at universities around the world. Despite many speculations that the pandemic had ushered in a ‘new normal’, the ‘old normal’ has persisted, with the traditional pedagogic models and governance practices remaining largely intact. During the pandemic, new pedagogic approaches were widely discussed. But the speculations were largely centred on how they could be accommodated within the market logic that

drove most systems of higher education (Rizvi, 2020). In relation to the internationalization of higher education, for example, much of the discussion was about how online tools could be utilized in recovering market losses, perhaps at a lower cost. Sidelined were any consideration of how online pedagogy might help to radically overhaul the nature of student engagement and student-teacher relations, how the processes of knowledge ownership, creation, distribution and utilization might be reimagined, and how the idea of learning itself might be re-conceptualized.

The disruptions caused by COVID 19 had given rise to an unprecedented set of difficulties and uncertainties, but they had also created an opportunity to fundamentally rethink issues of teaching and learning and knowledge and curriculum, to reimagine the meaning and significance of higher education, in which digital pedagogies could have an important role to play. As Cope & Kalantzis (2020, p. 1) had argued this demanded 'a rare imagination on the part of the teacher, as well as 'a preparedness to recede into the background and to tolerate a heightened level of pedagogical risk'. Online education, they had insisted, should not be seen simply as an alternative delivery system, but something that opened the possibilities of 'a new perspective on, for example, what "communication" means in the classroom and what it is for'. Yet, it is undeniably the case now that online tools continue to be used mostly to transmit knowledge in its canonical forms, failing to unsettle, for example, the colonial modes of thinking, Non-western knowledge traditions continued to be overlooked (Stein 2019). In this sense, the disruption surrounding Covid-19 failed to unsettle the traditional norms and practices associated with the purposes, practices and governance of higher education.

In contrast to the functionalist approach to navigating the politics of disruptions, a more radical view regards disruptions as an opportunity to ideologically steer higher education in what is assumed to be a desirable direction. In its extreme form, Naomi Klein (2007) has called this approach the 'shock doctrine'. Shock doctrine involves political and economic actors exploiting the chaos of crises like wars or natural disasters to implement radical policies that would otherwise be unpopular. Radical alternatives are proposed in a language that suggests that there is no other choice. In recent decades, disruptions have, for example, been used to promote extreme neoliberal economic policies, such as radical forms of deregulation and privatization, tighter fiscal policies and cutting back on public spending on welfare provisions. According to Klein (2007), modern capitalism thrives on chaos and crisis, often exaggerating ideologically even some of the very minor disruptions, arguing that they represent a moral crisis for which only solutions offered by those in power can be effective. Referring to this as 'disaster capitalism', Klein notes that this manner of navigating disruptions was first attempted in Chile in the 1970s under the pretext that the nation needed to undergo economic 'shock treatment'. Using a similar logic, in the 1980s and 1990s, 'structural adjustments' – standardised packages of neoliberal economic reform – were imposed by the World Bank and IMF throughout Africa, Asia and Latin America (Brown 2000).

When hurricane Katrina devasted the city of New Orleans in the United States in 2005, the disruptions were extensive, affecting all aspects of life across all communities in Louisiana, especially

African-Americans and other minorities. Systems of education had collapsed. This provided corporations and right-wing politicians an opportunity to overhaul the ways in which education was funded and governed, in their own ideological image. Even before Katrina, reforms were clearly needed in New Orleans since it had some of the lowest test scores in the United States, poor facilities and numerous examples of corruption. Since the earlier attempts at reform were often resisted by teacher unions, the disruptions caused by Katrina offered a unique opportunity to overhaul the educational system in New Orleans. Yet, there was nothing creative about this approach: it followed the same neoliberal script, including the mass closure of traditional schools replaced by a new, primarily charter-based system with school choice, the cancellation of union-negotiated contracts and a renewed focus on results-based accountability (Moe, 2019). In the case of New Orleans, the politics of disruptions thus proved conveniently useful to right-wing political interests.

Similar attempts at educational reform have been pursued by other states in the United States and elsewhere. Indeed, neoliberal reforms in higher education have now become a standard approach to navigating disruptions around the world. The language of urgency, gravity and severity is widely used to justify these reforms, often exaggerating the extent and intensity of disruptions. The major beneficiaries of this approach to navigating disruption are corporations, who stand to make large profits from the privatization of educational institutions, and those right-wing ideologues who detest the liberalism that they believe has become a major feature of higher education. For them, market-driven "shock therapy" is essential for remaking higher education. The discourses of disruption offer them an opportunity to pursue their ideological goals, especially when citizens are overwhelmed by changes to their normal routines. Indeed, sometimes, disruptions are deliberately invoked to introduce radical measures. During the current Trump regime, for example, disruptions associated with anti-war demonstrations on campuses are being used to alter the organizational ethos of universities in the United States committed to democracy and social justice (Darian-Smith, 2025).

Another increasingly popular approach to navigating disruptions in higher education is borrowed from the business literature. It is equally supportive of and embedded within neoliberal precepts and the logic of the market. The business guru, Clayton Christensen (1997) has promoted the idea that disruptions are both as an opportunity but also a commercial response to drive innovation, enabling a company with fewer resources to challenge established, market-leading firms by introducing a product or service that is initially simpler, cheaper, or more accessible. Christensen uses the term 'disruptive innovation', to describe a process that involves a new business challenging established "incumbent" business by creating new products for previously underserved populations and expanding the market. In this way, the new business competes with the incumbent by offering solutions to the problems that appeal to the incumbent's "mainstream" customers. Once the new entrant begins to attract the incumbent business's customers *en masse*, market is disrupted for the better, it is assumed.

Although the idea of disruptive innovation was developed in the business space, it has begun to be used, either explicitly or implicitly, by systems of higher education to explore ways of making

universities ‘leaner and meaner’, driven by a spirit of entrepreneurialism and enterprise that seeks to develop models of governance that are not only viewed as efficient and effective but also more responsive to the clientele they serve. The applicability of disruptive innovation to higher education is asserted by the Christensen Institute (2025) itself. Its website asserts that “our traditional models of education are outdated, leaving too many learners behind, disengaged, and ill-prepared for the future of work.” Thorough disruptive education, it suggests, it is possible to “expand access to a personalized and affordable education so that everyone has access to a choice-filled life”. It highlights four different modes of innovations: those that expand student networks and social capital; those that create and support new models of education; those that promote blended learning that unlock learning anytime, anywhere; and those that increase college return on investment.

As popular as Christensen theory of disruptive innovation has become, it has not been without critics. Perhaps the most acute criticism of Christensen’s theory of disruptive innovation has come from Jill Lepore (2014) in her long essay published in the *New Yorker*. Lapore argues that Christensen’s theory lacks both descriptive and predictive powers. It is based on a potentially oversimplified classification of innovations, and its core concepts are sometimes "cherry-picked" to fit the desired narratives, leading to neglect other relevant factors such as organizational capabilities and market dynamics. It is based on a caricatured history of why organizations succeed and fail, and pays insufficient attention to the contingent technological, market factors and other external dynamics and strategic responses. It is an abstraction that contributes to the misunderstanding and misapplication of the term "disruptive innovation" in popular discourse. With respect to higher education, a major limitation of the theory is that it treats education as a commodity and overlooks its social and ethical dimensions.

Linked loosely to Christensen’s claims regarding the predictive power of his theory in navigating and driving disruptions is another approach that has become popular in higher education in recent years, especially in the Nordic countries (Kallo & Vilimaa, 2025): the idea of anticipatory governance. Anticipatory governance is put forward as a proactive and strategic approach to decision-making that integrates foresight, innovation, and continuous learning into public policy to navigate complex future challenges such as demographic shifts, climate change and technological disruptions. Instead of merely reacting to events, this technocratic approach proposes the use of predictive methods and strategic planning to anticipate outcomes in ways that have become increasingly possible with the development in AI.

The idea of anticipatory governance builds of earlier notions of new public management and digital-era governance (Dunlevy, 2005). Dunlevy argues that beyond the capacity of digital tools to improve the practices of design, communication, coordination and evaluation, and lower costs for agencies, technological innovations have opened new opportunities to transform, in important ways, the relations between government agencies and civil society. Rapid growth in the use of Internet and the social media, for example, has generated the capacity to steer administrative and political change. Administratively, it is now possible to identify trends that enable organizations such as HEIs, to respond

more quickly and efficiently to shifting conditions as soon as their possible consequences become evident.

Favouring the idea of anticipatory governance, the OECD (2024) has argued that the emerging technologies can contribute to making unprecedented gains in fields such as health, energy and educational services, along with security, equity and human rights. Anticipatory governance, it has argued, allows systems to use foresight, forge a networked system that integrates foresight and policy procedures, and receive feedback to improve efficiency and knowledge. This ensures flexibility in policy processes. In the field of education, Ben Williamson (2016) has shown how digital database technologies function as new kinds of policy instruments, lending credibility to the idea of anticipatory governance. As part of a data-driven style of governing, he has shown how 'emerging digital policy instruments prefigure the emergence of 'real-time' and 'future-tense' techniques of digital education governance.' The idea of anticipatory governance also encourages the formation of a particular kind of subjectivity that is assumed to be more resilient, people-cantered, able to develop effective practices to address emerging trends and systemic challenges. However, the extent to which these claims can be supported by evidence remains unclear.

Democratizing Navigation

Just the same, it cannot be denied that the use of the emerging technology tools has the potential of being most helpful in navigating disruptions, but only when these tools are not controlled by a small group of technology corporations, intent on manipulating knowledge systems. In recent years, the role of a group of leading technology entrepreneurs has been shown to be self-serving and ideologically skewed towards a new form of toxic capitalism. Yanis Varoufakis (2023) has used the term 'technofeudalism' to argue that the massive influx of funds intended to revive the post-crisis and pandemic economies has had the effect of consolidating the dominance of 'big tech' over every facet of the global economy, leading to the emergence of a system resembling feudalism, where individuals are bound to the tech giants' platforms and rents, working as modern-day serfs.

While the information-handling potentialities of new technologies cannot be denied, recent experiences of digital-era governance show that their use in navigating disruptions remains ideologically tied to the demands of global capitalism. New technologies have increasingly permitted the emergence of new forms of exploitation and control, disproportionately benefiting the stronger political actors. They have done very little to promote the principles of democracy and social equity, in ways that that Dunlevy had hoped. As compelling as the data-driven techniques of anticipatory governance might appear, their utility in support of the broader mission of higher education is at best limited.

Indeed, each of the approaches to navigating disruptions discussed above is located within a narrow instrumentalist view of education. While these approaches are markedly different, ranging from attempts to subdue the impact of disruptions on universities and manage them with the use of technocratic tools

to seeing disruptions in opportunistic terms, they have largely been used to extend and consilidate markets and remake institutions in their preferred ideological modality. What is common to these approaches is their devotion to market rationality. None of these approaches challenges the assumptions of neoliberalism and global capitalism. Nor do they challenge the ideological drift towards populism, nationalism and authoritarianism. They assume that disruptions are best addressed by those who are entrepreneurs and business-savvy able to use the potential of the emerging technological tools. Not surprisingly therefore it is the 'tech bros' in the Silicon Valley who believe confidently that only they have the expertise and know-how to navigate the disruptions and steer the world in a more productive direction. In this way each of these approaches assume that disruptions are best understood and navigated by those in power for the presumed benefits of the rest of the population.

This paper has suggested a different understanding of the political response to disruptions in higher education is needed which builds on the democratic potential that resides within most communities. What is needed are spaces in which the meaning, scope and significance of disruptions can be examined, through an 'ethic of possibilities' as Appadurai (2014) has called it. This suggests the need to democratize the politics through which disruptions in higher education are understood, negotiated and navigated. This is necessary because without an understanding of the forms and sources of disruptions that potentially reshape the nature of their work and life, people cannot be expected to take ownership of the strategies of navigation, let alone engage in the politics of forging solutions to the problems they face.

While the idea of democratic governance does not admit a clear-cut definition, it does suggest open, responsive, and accountable institutions and processes that serve the needs and preferences of the relevant publics. It promotes the principles of participation, equity, accessibility and inclusion, ensuing that everyone has an opportunity to participate in deliberations about how they experience disruptions, both individually and collectively. It supports efforts to create spaces in which civic engagement becomes normalized, where critical voices are tolerated and encouraged. It requires the development of a civic culture in which capacities for democratic engagement are stimulated and cultivated. In developing such a culture, higher education has a crucial role to play. This is so because democratic governance does not only require educational systems to display the principles of equity and fairness but also requires of them pedagogic efforts to instil democratic values in students and teachers alike. With every likelihood that systems of higher education will in future continue to confront serious disruptions, it is important to develop such a culture for their navigation.

Conclusion

Driven by rapid technological advances, shifting geopolitics, and deep socio-economic transformations, higher education institutions around the world face profound and overlapping disruptions. In their

planning processes, they have sought to develop ways of understanding and navigating the disruptions, both existing and emerging, both probable and possible. In this paper, the concept of disruption has been interrogated. Such an interrogation, it is suggested, is necessary to develop effective ways of navigating its occurrence and impact along with its possibilities, in the contemporary discourse of higher education in which the idea of disruption has been deployed in a range of contrasting ways.

This paper has attempted to show how the concept of disruption can be interpreted in a wide variety of ways, In the space of higher education, contrasting accounts of disruptions facing universities are possible. No account of disruption can be said to be complete and objective, as I have demonstrated with respect to Australian Government's Universities Accords policy. Each characterization of disruption is inherently political and contestable. Disruptions are not neutral events but are discursively constructed, often articulated to advance specific ideological and market-oriented agendas. Navigating them has typically followed approaches that are based on a conservative functionalism that seeks to restore a pre-disruption 'status quo'; have promoted a neoliberal 'shock doctrine' that exploits crises to impose radical market reforms and privatization; or relies on a technocratic faith in 'disruptive innovation' and 'anticipatory governance' that remains embedded in capitalist logics. These approaches often concentrate agency in the hands of corporate and political elites, treating education as a commodity and undermining the democratic and social justice missions of the university. These approaches, however, have not remained uncontested.

Within the context of the politics of navigation of disruptions, this paper has suggested that an alternative to technocratic elite-driven approaches is to consider the possibilities of developing democratic resilience. This implies the need to create inclusive, participatory spaces where academic communities can collectively interrogate the meaning, causes, and implications of disruptions. Such an approach empowers universities to harness their potential proactively, not as passive subjects of change or instruments of external interests, but as self-determining agents shaping a future that balances innovation with equity, ethical wisdom, and the public good.

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Leadership Competency, Styles and Contexts of Higher Education Institutions in Korea and Taiwan

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Abstract. Structural reforms, including governance and financial reforms, are not sufficient for higher institutional performance without corresponding leadership development. This study analyzes how faculty members assess an institutional leader's leadership based on a survey of 2,018 faculty members in the higher education systems of Korea and Taiwan. The findings suggest that effective communication is a crucial factor in leadership competency. The study also investigates three leadership styles: scholarly, managerial, and political. The results indicate that scholarly and managerial leadership styles have a significant influence on leadership competency in Taiwan, whereas scholarly leadership is more important in Korea. Furthermore, leadership competency depends on various contexts, including collegiality culture, governance, and faculty members' academic identities. This study supports contemporary leadership theories that emphasize the importance of communication, the use of multiple leadership styles, and the close association between leadership and context. Additionally, this study identified subtle differences between the two higher education systems in Korea and Taiwan. This variation in the extent of state involvement may explain the differences between Korea and Taiwan in leadership competency and preferred leadership styles.

Keywords: collegiality culture, academics' identity, governance, leadership competency, leadership styles

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1. Introduction

States in East Asia have focused on governance and funding reforms, emphasizing institutional autonomy and empowering institutional leaders under neoliberal reforms (Shin, 2018). Despite these efforts, research has shown that more than governance reform is needed to achieve higher performance levels in higher education institutions (HEIs) (e.g., Maassen, 2017). Structural reforms, including governance and financial reforms, may not be sufficient to achieve higher institutional performance, but they are necessary to improve it (Shin, 2018). Within governance reforms, effective leadership, especially among senior managers, is crucial for institutional performance, as it heavily relies on human factors (Breakwell & Tytherleigh, 2010; Goodall, 2009; Mintzberg, 2013). However, there is a paucity of empirical studies on institutional leadership, especially comparative ones, as Badillo-Vega, Krücken, and Pineda (2021) found in their comprehensive systemic review. This study aims to address this gap by examining how faculty members evaluate their senior managers' leadership in a comparative study conducted in South Korea (hereafter, Korea) and Taiwan.

Leadership theories have emphasized the physical, psychological, social, and behavioral characteristics of leaders and how these characteristics are applied across various leadership contexts (e.g., Antonakis & House, 2014; Michael, Samuels, & Kleinman, 2014; Middlehurst, 2008; Spendlove, 2007). Although contemporary theories emphasize different dimensions of leadership, they highlight the importance of close communication between leaders and followers (Kezar, 2020; Smerek, 2011). However, these theories are rarely modelled and empirically tested in higher education leadership studies. In higher education, scholarly leadership is often ideal because the university president symbolizes the academic community (e.g., Bolden, Gosling, & O'Brien, 2014; Erickson, Hanna, & Walker, 2021). Nevertheless, in complex leadership contexts, institutional leaders are expected to be skillful political leaders, efficient and effective managers, and respected scholars (e.g., Jones et al., 2014; Middlehurst, 2008). It remains an empirical question whether a single leadership style, such as scholarly leadership, is effective for institutional management.

Furthermore, contemporary leadership research suggests that leadership quality varies across different contexts, rather than having a single best leadership style applicable to all contexts (e.g., Badillo-Vega, Krücken, & Pineda, 2021; Jones et al., 2014). According to these leadership theories, defining leadership contexts is critical for effective leadership (e.g., Bolman & Deal, 2003). Among the various approaches to understanding institutional contexts, structural dimensions, such as governance and management, as well as organizational dimensions, including institutional culture and followers' characteristics, are essential to researching leadership in higher education (e.g., Kezar & Holcombe, 2020; Middlehurst, 2008). However, most leadership studies in higher education have focused on these factors separately rather than considering them in an analytical model. This limitation is significant

because research on senior managers' leadership has relied primarily on their writing and interviews (e.g., Croucher et al., 2020).

This study examines how faculty members evaluate leadership competency in the higher education systems of Korea and Taiwan, using the terms 'university presidents' and 'institutional leaders' interchangeably, depending on the context. Followers' perceptions may better capture leadership competency than leaders' perceptions (Erickson, Hanna, & Walker, 2021). The study selected Korea and Taiwan as cases for comparison because political considerations, such as faculty voting and their connection with stakeholders, are critical factors in their university president appointments. The states have the final authority to select from the recommended shortlists among public and national universities (hereafter, public universities) (Shin, Huang, & Hou, 2022; Shin et al., 2025). However, senior managers in both countries exhibit distinct profiles in their prior experience as institutional leaders, according to Shin, Huang, and Hou (2022). These similarities and differences enable researchers to develop in-depth discussions for leadership development in higher education. For this empirical study, three research questions:

First, does institutional leaders' communication with faculty members positively affect perceived leadership competency?

Second, do leadership styles have an association with perceived leadership competency?

Third, do contextual factors such as governance and management, culture, and academics' identity have an association with perceived leadership competency?

2. Background of Research

The following section discusses various leadership styles prevalent in the higher education context to align with the research questions of this study. Furthermore, it examines leadership contexts, with a specific emphasis on higher education settings in Korea and Taiwan, where this study is based.

2.1 Leadership research in higher education

Leadership theory emphasizes differences in organizational performance by contrasting various perspectives on leadership. Transformational and transactional leadership are frequently compared and discussed because they are grounded in distinct assumptions about human behavior (Astin and Astin 2000). Transformational leadership emphasizes interactive, team-based leadership, while transactional leadership focuses on the exchange of needs and services between leaders and followers (Dinh et al., 2014; Kezar, Carducci, and Contreras-McGav, 2006). More specifically, transformational leadership emphasizes the 'social process' of engaging organizational members in the organization's processes to strengthen the collective competency of the organization (Day 2000; van Ameijde et al. 2009). On the other hand, transactional leadership emphasizes the rewards and incentives that leaders offer their

followers. As discussed by Gronn (2008) and Astin and Astin (2000), the transformational leadership perspective is widely supported in discussions of leadership in higher education.

Accordingly, leadership research in higher education emphasizes effective communication between leaders and followers (e.g., Kezar & Holcombe, 2020; O'Connor & Carvalho, 2015). For example, Shin et al. (2025) found that effective communication is a significant factor in explaining university presidents' leadership competency in Japan, Korea, and Taiwan. In US higher education, Bensimon (1991) highlights the importance of good communication for new presidents as they develop their leadership in newly hired institutional contexts. Furthermore, Smerek (2013) explains this close communication between leaders and faculty members as a process of sense-making and sense-giving. These studies emphasize the communication between presidents and their teaching and administrative staff, especially with their faculty members. However, good communication between the president and faculty members is not generally a feature of leadership practices in state-centered systems (Shin et al., 2022).

Additionally, a body of research has focused on various leadership styles. For example, Birnbaum (1988) classified leadership styles in US universities according to four types (bureaucratic, collegial, political, and symbolic). In addition, Gerashchenko (2022), Griffith & Mullins (1972), and White, Carvalho, & Riordan (2011) contribute further to our understanding of leadership styles and behaviors, especially in countries other than the US. Griffith and Mullins (1972) proposed two styles of leadership (organizational and intellectual), and White, Carvalho, and Riordan (2011) focused on collegial leadership (intellectual leadership in Griffith and Mullins) and managerial leadership (organizational leadership in Griffith and Mullins) in their comparative study of senior managers' leadership (see also Kezar & Holcombe, 2020). Gerashchenko (2022) compared the behavioral patterns of university presidents in terms of political and managerial leadership in her recent research on leadership in Russia.

Although researchers classify leadership styles by names and foci, this study focuses on scholarly, managerial, and political leadership. Political leadership is addressed in different ways. For example, Trow (1985, 143) defines political leadership as 'a leader's ability to resolve the conflicting demands and pressures of his many constituencies, internal and external, and in gaining their support for the institution's goals and supposes….' Similarly, Lavigne and Sa (2021, 540) understand political leadership (or frame) as leadership that 'focuses on conflict and the role of coalition-building in resource-limited settings….' The political leadership style is well developed in systems where institutional leaders are elected through faculty voting (Gerashchenko, 2022).

Managerial leadership emphasizes the efficiency of management rather than political representation or the resolution of conflicting demands and pressures within the university and between the university and external stakeholders (Middlehurst & Elton, 1992). For example, Trow (1985) emphasizes that managerial leadership aligns with the efficiency of institutional management by directing, coordinating,

managing budgets, planning, and decision-making. Similarly, Gerashchenko (2022) argues that managerial leadership is better aligned with institutional competitiveness because leaders represent the entire university rather than their affiliated academic unit. As a result, the appointment of institutional leaders depends on their leadership skills rather than their political representation. In this case, states or governing boards also actively recruit leaders from outside universities to reform their universities more aggressively (e.g., Ekman, Lindgren, and Packendorff, 2018; Gerashchenko, 2022; Shin et al., 2025).

Compared to political and managerial leadership, scholarly leadership is highly respected by faculty members (e.g., Bolden, Gosling, & O'Brien, 2014; Erickson, Hanna, & Walker, 2021; White, Carvalho, & Riordan, 2011). The notion of scholarly leadership holds that a university president represents the academic community and should be a respected scholar. These leaders tend to respect their faculty members as colleagues and provide them with autonomy and academic freedom (e.g., Birnbaum, 1992; Kehm, 2020). This leadership is represented by the notion that the president is 'the first among the equals.' However, scholarly leadership does not necessarily imply skills in political coordination or management. This type of leadership is relatively well represented among rectors in continental European universities.

Leadership theories emphasize the various leadership styles that influential leaders employ, adapting to specific issues and problems rather than adhering to a single best style (Middlehurst 2008). This is particularly true in rapidly changing institutional environments, where the best strategy used in the past may no longer be effective in the new environment (e.g., Bolden, Petrov, & Gosling, 2009; Shattock, 2013). In response to the rapidly changing environmental challenges, institutional leaders are expected to be more flexible, and their leadership needs must shift accordingly to address the issues they confront (Fullan & Scott, 2009). However, they are not well-prepared for leadership roles, and their leadership is not very flexible because they work within given bureaucratic and hierarchical organizational contexts, as Hüther and Krücken (2013) discussed in the context of German higher education. This may also be the case for universities in Korea and Taiwan, where professional leadership development is not well established.

2.2 Leadership contexts in higher education

Leadership effectiveness also depends on institutional characteristics (e.g., Bolman & Deal, 2003; Kezar, Carducci, & Contreras-McGav, 2006; Liu et al., 2020). In higher education research, institutional characteristics are often explained in terms of structural and cultural dimensions (e.g., Clark, 1983). Among structural dimensions, governance and management are core leadership concepts (Middlehurst & Elton, 1992). Under neoliberalism, states encouraged governance reforms to reduce their direct involvement in HEIs and empower institutional leaders to manage them more efficiently and effectively (e.g., Shattock, 2013). At the same time, states adopted performance-based accountability to improve institutional performance and competitiveness (e.g., Jongbloed, 2020). Under this changing policy

environment, HEIs began considering performance in their internal resource allocation and personnel (e.g., faculty quarter, hiring, promotion). These reforms create favorable management environments for institutional leaders, enabling them to implement their management strategy through internal resource allocation (e.g., Shin & Jones, 2022).

In addition, institutional culture is essential to institutional leadership (Birnbaum 1992). Although culture is differently defined (Schein 1985), it is a shared norm, belief, and assumption among organizational members, and these shared cultural dimensions define the leadership environment. Among the shared beliefs in HEIs, collegiality and mutual respect among faculty members lie at the core (Bensimon & Neumann, 1993). Collegiality among faculty members has a long history, dating back to the emergence of the medieval university, which was a union of professors (as in Paris University), and it further developed with the academic freedom of the modern university in Germany (e.g., Zgaga, 2012). The lack of such collegiality affects the quality of teaching and research. Similarly, leaders who respect collegiality among their faculty members are respected as academic leaders, and others highly regard their leadership.

Ultimately, leadership effectiveness may vary depending on the socio-psychological characteristics of organizational members. One crucial socio-psychological characteristic is organizational members' identity within their affiliated organizations (Billot 2010). For example, some academics value research (researchers), while others value teaching (teachers) (e.g., Gouldner, 1957; Teichler, Arimoto, & Cummings, 2013). Teachers tend to show relatively strong loyalty to their affiliated institutions, while researchers tend to show loyalty to their academic discipline. This is because academics with high research performance tend to prefer moving to other universities if they offer better research environments (e.g., He, Zhen, & Wu, 2019). Strong loyalty among organizational members to the institution fosters a favorable leadership environment. However, suppose their identity is primarily that of a member of their discipline (rather than their university). In such cases, leaders require considerable time and energy to address internal conflicts between departments and colleges (or faculties) (Gerashchenko, 2022). In response to changing academic environments, higher education studies (e.g., Billot, 2010; Dugas et al., 2020; Levin & Shaker, 2011) have begun to focus on the dual identity of teacher and researcher, rather than emphasizing one role over the other.

2.3 Senior managers' leadership in Korea and Taiwan

Leadership is exercised by a team comprising the university president and their cabinet members (Croucher et al., 2020). Conventionally, senior managers include vice presidents (and, to some extent, deans at university headquarters) and the president, because the university president and their team together lead the university, as in other systems (e.g., O'Connor & Carvalho, 2015). In most public universities, the president is elected by the faculty and then appoints his cabinet members (the vice president and the dean at headquarters) in Korea and Taiwan (Shin, Huang, & Hou, 2022; Shin et al.,

2025). Although each university has developed its own approach, faculty voting may be a representative method for selecting democratic leaders. However, faculty voting may or may not be used in private universities for appointing their presidents. More specifically, historically old and large-scale private universities have developed more democratic processes, such as faculty voting in the appointment of their presidents. In contrast, relatively new and small-scale private universities appoint their presidents by their boards of trustees. Due to these differences, the profiling and leadership styles of public and private universities can vary.

In addition, states are also involved in the university president appointment process to some extent, and their influence has been increasing due to managerial reforms (Shin et al., 2025). Although faculty voting is critical for short-listed candidates in public universities, the state has the formal authority to appoint the university president through the Higher Education Act in Korea and the University Act in Taiwan. In this context, the state's approach to its relationships with universities varies depending on the political leadership in place. For example, the state might appoint a president based on the leadership capability of the short-listed candidates or nominate the candidate who received the highest number of votes. As a result, the university president's appointment can be controversial among politicians and faculty members (e.g., Mok, 2014; Oh, 2017; Shin et al., 2025). However, the state's role is negligible in the appointment of university presidents at private universities, where the board of trustees holds final decision-making power, as stipulated in the Private School Act in Korea and the University Act in Taiwan.

The presidential appointment process is highly politicized in public universities due to the dual levels of the political process — faculty voting at the university level and the state-level political process. In addition, large-scale private universities tend to use faculty voting in the appointment of the university president. Even if faculty do not have voting rights in private universities, political considerations remain critical. This is because presidents' close connections with the state, industry, local community, and alums are crucial to their survival in rapidly changing higher education environments. However, there are subtle differences between Korea and Taiwan, though both systems share many similarities. For example, Shin et al. (2022) found that many Korean university presidents (55%) are alumni, whereas this is significantly less common in Taiwan (15%). In addition, only half of the Korean presidents had prior experience as senior managers, whereas in Taiwan, the figure is 96%. In general, many Korean university presidents are alumni, and their management experience is relatively weak, although the appointment systems for university presidents are similar to those in Taiwan. These differences in presidents' profiles suggest that the leadership and management competency of presidents might differ between these countries.

3. Method

This section provides a brief overview of the data used in this analysis, followed by an explanation of the variables employed and the analytical models applied.

3.1 Data

The data for this study is based on the Academic Profession in the Knowledge-based Society (APIKS) data collected by international comparative research teams from approximately 30 countries (or systems) (APIKS-IDB, 2021). Both Korea and Taiwan participated in the authors' data collection in 2018. The survey questions were implemented through an online survey sent to a sample of 12,714 in Korea and 11,534 in Taiwan. The survey response rates are low – 6.7% in Korea and 10.6% in Taiwan. The low return rate is unsurprising, given that the survey takes approximately 40 to 60 minutes, and faculty members have heavy workloads. The survey questions focused on governance, management, and academics' significant activities, including teaching, research, and external activities, as well as their demographics. The survey items on leadership competency are included in the governance and management section, providing a snapshot of their senior managers' leadership competency and related variables.

3.2 Analytical Model and Variables

The unit of analysis is individual faculty level because this study is interested in how individual faculty members perceive their institutional leader's leadership competency. Institutional leaders represent university presidents, vice presidents, and deans of university headquarters in Korea and Taiwan. Although we did not differentiate between leadership roles, such as presidents, vice presidents, and deans, faculty members perceive their top-management positions as a team and consider them leadership positions, as noted in Croucher et al. (2020). Ideally, we might assess the leadership competency of individual universities based on faculty members' perceptions of their university presidents' leadership competency. However, identifying who belongs to which university is not permitted due to the need to protect personal information and the requirements of the Internal Review Board (IRB). Under the current data-collection conditions, our analysis treats the individual faculty member as the unit of study.

The dependent variable in this study is institutional leaders' leadership competency, and the independent variables are senior managers' communication with faculty members, university presidents' leadership styles, and institutional context. This study modeled good communication as an independent variable to explain leadership competency. Theoretically, good communication could be a dimension of leadership competency, especially in the social process perspective on leadership. In leadership theory and practice, however, leadership is more than good communication, as it emphasizes "sharing" visions and goals among organizational members. In addition, this study aligns more closely with how communication is associated with followers' perceptions of leadership competency. This approach is adopted in research contexts in Korea and Taiwan, where the top-down approach is accepted as an

efficient way of organizational management. In this regard, good communication is a necessary but not sufficient condition. Accordingly, this study modeled good communication as an independent variable while leadership competency was the dependent variable.

The dependent variable is measured using a 1-5 Likert Scale. The independent variable for research question 1 is good communication between leaders and faculty members, and research question 2 is how much faculty members assess each of the political, managerial, and scholarly leadership styles of their university presidents. This study used university presidents' leadership style as the independent variable, though senior managers measured leadership competency. This is because the president's leadership represents the leadership style of their senior management team. These independent variables are measured by a 5-point Likert Scale, the same as the dependent variable. In addition, independent variables for research question 3 are governance and management, academic culture, and academic identity. The governance and management are the means of two survey items (1) "at my institution, there is a strong teaching performance orientation," and (2) "at my institution, there is a strong research performance orientation." Collegiality culture is measured by a survey item, "at my institution, there is collegiality in decision-making processes," and academic identity is measured by whether academics prefer research or teaching, or both research and teaching. In this study, academic identity can be categorized into one of three categories: researcher identity, teacher identity, or a dual identity of both teacher and researcher. This study includes academic identity as dummy variables, with teacher identity serving as the reference group, because teachers may be more sensitive to their institutional leaders' leadership.

Other control variables are demographic characteristics such as gender, age, and marital status. In addition, their academically affiliated disciplines are included and coded by hard and soft disciplines, their tenure statuses are dummy-coded, and institutional characteristics are included and coded by public and private HEIs. Details of variables and their measures are reported in Table 1.

Table 1. Variables and Measures

Variables		Measurement
Demographic background	Gender	Male = 1; female = 0
	Age	2018 - birth year
	Marriage	Married = 1; single = 0
Academic disciplines	Hard/soft	Hard = 1; soft = 0
Tenured	Tenured/not tenured	Tenured = 1; not tenured = 0
Academic identity	Researcher	Researcher = 1; others = 0
	Researcher & teacher	Researcher & teacher = 1; others = 0
Institutional characteristics	National or public /private HEIs	National or public = 1; private = 0
Culture	Collegiality	"at my institution, there is collegiality in decision-making processes" (5-point Likert scale)
Governance & Management	Performance-based management	Mean of two survey items (5-point Likert scale): (1) "at my institution, there is a strong teaching performance orientation," (2) "at my institution, there is a strong research performance orientation"
Leadership	Competence	At my institution, there is a competent leadership
	Communication	At my institution, there is a good communication between management and academics
	Political LS	Your president has political leadership (5-point Likert scale)
	Managerial LS	Your president has managerial leadership (5-point Likert scale)
	Scholarly LS	Your president has scholarly leadership (5-point Likert scale)

3.3 Analytical Model

This study analyzes leadership competency using Ordinary Least Squares (OLS) regression. For the regression analysis, our dependent variable is leadership competency, and the independent variables are communication between leaders and followers and leadership styles (political, managerial, and scholarly). In addition, our leadership contexts are modeled by three variables: governance and

management, collegiality culture, and academic identity. Finally, our control variables are academics' demographics (gender, age, and marital status), academic affiliation (hard vs. soft disciplines), tenure status, and institutional characteristics (public vs. private). We developed two stages of regression analysis to examine how the total variance explained increases when leadership context variables are included, as one research question in this study is whether leadership competency depends on leadership context.

4. Findings

This section presents descriptive data from our analysis of variables, followed by the results of the OLS test**.**

4.1 Descriptive data

Taiwanese academics perceive their senior leaders to demonstrate a higher level of leadership competency than their Korean colleagues. The leadership competency of Taiwanese managers may be associated with greater communication efforts than those of Korean leaders. In addition, Taiwanese leaders demonstrate greater leadership competency across political, managerial, and scholarly domains than their Korean counterparts. However, the leadership contexts, such as governance and management, and academic identity, are similar between Korea and Taiwan, but differ in terms of collegiality. In general, leadership competency, communication between management and academics, and their leadership styles differ noticeably between the two countries, as indicated by the descriptive statistics presented in Table 2.

Table 2. Descriptive Statistics of Dependent and Independent Variables

	Korea			Taiwan		
	N of cases	Mean	SD	N of cases	Mean	SD
Leadership competence	710	3.11	0.99	1,224	3.68	1.05
Communication	710	2.54	0.96	1,224	3.35	1.06
Political leadership	735	2.86	1.19	1,224	3.54	1.15
Managerial leadership	735	2.85	1.22	1,224	3.96	0.95
Scholarly leadership	735	2.57	1.14	1,224	3.56	1.11
Collegiality culture	710	2.47	1.00	1,224	3.40	1.06
Performance-based management	710	3.76	0.75	1,224	3.45	0.79
Researcher	264	0.31	0.46	200	0.30	0.46
Researcher & teacher	567	0.65	0.48	984	0.75	0.43
Teacher	16	0.65	0.48	40	0.70	0.46

4.2 Regression analysis

This study found that our analytical models are relatively well-represented in the data in both Korea and Taiwan. For example, the analytical model for Korea explains 34.8% of the total variance, while in Taiwan, it explains 57.2%. In addition, the variance explained increased by 6.9% in Korea when contextual variables were incorporated, suggesting that contextual factors are crucial for explaining leadership competency. However, the increase in total variance explained (1.9%) by adding contextual factors is much smaller in Taiwan. These differences in the rise in total variance explained by adding contextual factors can be attributed to the high total variance in Taiwan, where the *R2* is 55.3% without them. This is because once the total variance is presented on a high level, the increase in total variance explained by adding new variables is marginal. After all, the model is already saturated. The OLS regression results are reported in Table 3.

As shown in Table 3, good communication with followers is a significant factor in leadership competency, controlling for other factors, in both Korea (b = 0.228, p<.001) and Taiwan (b = 0.370, p<.001). In addition, scholarly leadership is significantly and positively associated with leadership competency (b = 0.105, p<.05) in Korea. In contrast, both scholarly leadership (b = 0.154, p<.001) and managerial leadership (b = 0.256, p<.001) are positively and significantly associated with leadership competency in Taiwan. However, political leadership is not significantly associated with leadership competency in Korea or Taiwan. Furthermore, leadership contexts that are measured by collegiality culture (b = 0.225, p<.001 in Korea; b = 0.131, p<.001 in Taiwan) and performance-based management

(b = 0.239, p<.001 in Korea; b = 0.110, p<.001 in Taiwan) are significant both in Korea and Taiwan. However, academic identity as a researcher was insignificant in Korea and Taiwan. In contrast, academics' dual identity (as both researcher and teacher) is significant in Korea (b = 0.272, p<.05) and Taiwan (b = 0.135, p<.05).

Among the control variables included in this study, age is negatively associated with leadership competency in Taiwan (b = -0.007, p<.05), while it is not in Korea; hard discipline is negatively associated with leadership competency in Korea (b = -0.170, p<.05), while it is not in Taiwan. Additionally, academics at public universities (b = -0.155, p<.01) perceive their leadership competency as lower than that of their colleagues at private universities in Korea. At the same time, it is not the case in Taiwan. Other than these control variables, gender, marital status, and tenure were not statistically significant when controlling for the different variables.

Table 3. Results of OLS regression on leadership competence in Korea and Taiwan

	Korea (*N*=691)		Taiwan (*N*=945)	
	Model 1	**Model 2**	**Model 1**	**Model 2**
Personal Characteristics				
Gender	-.097	-.072	.060	.061
Age	.006	.007	-.008*	-.007*
Marriage	.047	.012	.038	.041
Discipline	-.150*	-.170*	.024	.012
Tenure	.014	-.001	.075	.063
Institutional Characteristics				
Institutional type	-.067	-.155**	-.024	-.014
Leadership				
Good communication	.379***	.228***	.452***	.370***
Political leadership	.076	.081	-.015	-.013
Managerial leadership	-.039	-.055	.265***	.256***
Scholarly leadership	.151***	.105*	.196***	.154***
Culture				
Collegiality in decision-making		.225***		.131***
Governance and management				
Performance-based management		.239***		.110***
Identity				
Researcher identity		.154		.121
Researcher & teacher identity		.272*		.135*
F	26.301***	25.754***	115.413***	88.768***
R^2	.279	.348	.553	.572

*$p < .05$, ***$p < .001$

5. Discussion

This study found that good communication is a critical aspect of leadership competency, and both scholarly and managerial leadership styles are common, whereas political leadership is not. In addition, leadership competency depends on contexts such as collegiality culture, performance-based management, and academic identity, which encompasses both the researcher and teacher rather than a single identity of researcher or teacher. This section discusses these findings from leadership practices and theoretical perspectives in Korea and Taiwan.

First, as shared and relational leadership theories emphasize (Jones et al., 2014), good communication between leaders and followers is essential to leadership development in higher education. In their study on university presidents' leadership, Shin et al. (2025) found that presidents' communication with their faculty members is a core part of their leadership and of their competency for presidential roles and as head managers. As the descriptive statistics in Table 2 show, institutional leaders, especially in Korea, need to communicate more effectively with their faculty. Our observations of university leadership practices suggest that most leaders remain in their offices, sign memoranda, and deliver welcoming speeches at various events. Even in the US, where leadership and management are relatively well institutionalized, Bensimon (1989) has reported similar findings. For example, faculty members strongly desire that their president actively communicate with and sympathize with them in US-based research (Bensimon, 1991; Smerek, 2013).

Second, this study found that academics in Taiwan prefer multiple leadership styles (managerial and scholarly leadership), whereas scholarly leadership is chosen in Korea. Scholarly leadership is viewed as the traditional norm of 'first among equals.' However, they also want their leaders to lead their universities to be competitive in the global environment. Furthermore, numerous campus issues require resolution, and these problems can only be effectively addressed with solid leadership skills (Bolden, Petrov, & Gosling, 2009; Spendlove, 2007). This is why states have empowered institutional leaders through reforms in governance and management (Shin, 2018). However, Korean faculty members do not seem to regard their leaders' management roles as highly as their colleagues in Taiwan.

The preference for scholarly leadership may stem from the fact that management skills receive little consideration in the presidential appointment process in Korea. For example, most university presidents in Korea lack prior experience as senior managers, as noted in Shin, Huang, and Hou (2022). In the appointment process in Korea, political factors such as faculty voting and political connections with stakeholders are the most influential. In contrast, in Taiwan, it is only one of several considerations. If political considerations are the most influential factor, managerial leadership skills will likely receive little attention in the appointment process, and the appointment will rely heavily on political factors such as popularity among faculty members and their political connections with stakeholders.

Third, leadership contexts, including institutional culture (collegiality), governance and management (performance-based management), and academic identity (dual identities), were significant in this study. This finding aligns with the theory that views leadership effectiveness as closely tied to the leadership context (e.g. Bolman & Deal, 2003; Kezar, Carducci, & Contreras-McGav, 2006; Middlehurst, 2008). Academics view their leadership competency positively when their universities have a collegial culture and a performance-based management system, and when faculty members have a dual identity as both researchers and teachers. Collegiality culture is the preferred leadership context due to the mutual respect between senior managers and faculty members. Similarly, faculty members positively assess senior managers' leadership when they can communicate with these managers as colleagues rather than as top-down managers.

Additionally, performance-based management provides a foundation for efficient institutional management, particularly in internal resource allocation and faculty compensation. However, performance-based management is a significant challenge for HEIs in East Asian universities, where personal network-based resource allocation has long been established (e.g., Shin, Jung, & Lee, 2016). Network-based management remains in place in the region. One may argue that this is no longer true, especially in top-tier universities. However, we often observe that counter-meritocracy is enforced through the faculty voting process, where candidates 'purchase' votes in exchange for a meritocratic system. Academic preference for performance-based management, particularly in terms of leadership competency, reflects this social context and implies that performance-based management is the foundation for effective leadership.

With an academic identity rooted in dualism, academics who hold both researcher and teacher identities tend to assess the competency of their senior leaders positively. Academics with strong research performance and a researcher identity might move to other universities because they are more loyal to their disciplines than to their affiliated institutions (Gouldner, 1957). In this context, motivated academics often have a dual identity as both teachers and researchers, and tend to support their leaders.

6. Conclusion

This study approached leadership competency through followers' perceptions of their senior managers, whereas existing research on leadership, mainly that on university presidents, relies on leaders' experience. However, leadership competency from the leaders' perspective provides minimal information because these studies do not reflect their followers' perspective. From this point, this study contributes to our understanding of leadership competency from the followers' perspective. The empirical data on which this study is based support contemporary leadership theories that emphasize the importance of communication, the use of multiple leadership styles, and the close association between

leadership and context. Additionally, this study identified subtle differences between the two higher education systems in Korea and Taiwan. Specifically, the state is more actively involved in the appointment process for university presidents, and it now considers their management capabilities in Taiwan. In Korea, on the other hand, the state is less influential in the president's appointment process and tends to respect the faculty's vote.

There are, however, several important caveats. Although leadership is widely regarded as crucial for institutional competitiveness in evolving higher education environments, this study does not assume that strong leadership necessarily produces effective outcomes. Bryman (2007, 707), in a comprehensive review of leadership research in higher education, noted that effective leadership is often defined as much by 'what leaders should not do' as by 'what leaders should do,' reflecting the complex and context-dependent nature of leadership in academic settings. Similarly, Birnbaum's (1989) seminal analysis of governance in higher education emphasized that HEIs are not fully shaped by formal leadership authority, as academic professionalism prioritizes intrinsic motivation, professional autonomy, and disciplinary norms over external managerial direction. Although developed in the context of collegial governance, this perspective remains highly relevant, as contemporary HEIs continue to operate through negotiated authority structures in which leadership influence is mediated by academic culture, professional legitimacy, and organizational context. Consistent with this view, Middlehurst (2008) argued that leadership development in higher education should not rely on generic competency frameworks, but rather on context-sensitive processes that acknowledge the contingent, relational, and negotiated nature of leadership practice.

Finally, the authors note some limitations of this study. First, leadership competency was measured by the senior management team, while the university presidents' leadership was measured by their leadership style. This is because the president's leadership is crucial and strongly influences the senior management team. Although we acknowledged this limitation, it is challenging, in theory and methodologically, to measure leadership by the entire senior management team. These limitations might be further addressed through in-depth investigations, including a follow-up survey and interviews with faculty members and leaders. Additionally, some variables (leadership competency, leadership styles, and leadership contexts) are based on a single survey item rather than multiple items. These caveats and limitations should be considered when interpreting the findings and their implications.

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The Rhetoric of Research-Informed Teaching: Unpacking ambitions and assumptions in the UK's teaching excellence framework

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Abstract. The concept of Research-Informed Teaching (RIT) is widely referenced in higher education discourse, yet its precise definition and implementation remain nebulous and contested. This study critically examines the rhetoric surrounding RIT within England's Teaching Excellence Framework (TEF), analysing how research is framed as a driver of 'teaching excellence' in institutional submissions, yet through a thematic analysis of 'Russell Group' university provider statements, a fundamental disconnect between the ambitious claims made about RIT and the implicit assumptions that underpin them is demonstrated. While universities emphasize the transformative potential of research to enrich student learning, the mechanisms through which this occurs are frequently under-theorized and inconsistently articulated.

Findings reveal that RIT is often framed through broad, aspirational narratives that lack clear pedagogical grounding. The study identifies two dominant themes: 'ambitions,' which encapsulate explicit claims about the benefits of integrating research into teaching, and 'assumptions,' which expose the uncritical and sometimes contradictory ways in which this integration is positioned. Consequently, the TEF's high-stakes performative nature can be seen to further incentivise superficial engagement with RIT, prioritizing institutional positioning and recognition over substantive pedagogical development.

Ultimately, this research highlights the rhetorical function of RIT within the TEF and its implications for 'teaching excellence'. Without clearer conceptual and empirical grounding, RIT risks remaining a convenient yet unsubstantiated ideal rather than a tangible educational practice. The study calls for a more critically rigorous, 'evidence-based' and reflective approach to embedding research within teaching, ensuring that claims of integration align with genuine pedagogical outcomes rather than performative institutional rhetoric.

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Keywords: Ambitions and Assumptions, Research Informed Teaching; Research Teaching Nexus, Teaching Excellence Framework, Thematic Analysis

Introduction

Humboldt's concept of 'zero differentiation' between institutional teaching and research objectives (Schimank and Winnes, 2000) underscores an intrinsic and inextricable connection between these two domains. However, the unity and definition of teaching and research, commonly termed 'research-informed teaching' (RIT), remains elusive and ambiguous. While the relationship between teaching and research in higher education institutions (HEIs) is often described as symbiotic, the specific and precise benefits of this relationship, particularly the translation of research into teaching, remain complex, underexplored, and conceptually unclear.

Universities vary in their emphasis on research and teaching; some prioritize research, others focus on teaching, and many strive for a balance between the two. Consequently, variability exists in how students experience RIT, which is further shaped by institutional, financial and policy pressures. Healey's (2005) framework categorizes the relationship between teaching and research into research-led, research-oriented, research-tutored, and research-based approaches. While this framework attempts to delineate the semantics and application of RIT, it fails to fully capture the complexities of the research-teaching 'nexus'. Furthermore, despite references to RIT within UK higher education policy documents, including the UK Professional Standards Framework (UKPSF), Universities UK, Russell Group universities, Office for Students (OfS), Quality Assurance Agency (QAA), and Advance HE, its conceptualization and application in enhancing the student experience lacks clarity and remains vague.

Whilst RIT is therefore framed as beneficial (Pearce, 2019) and positioned as a key feature in the international marketization and performativity of universities (Smith, 2024), its presence, implementation and translation into practice frequently appears superficial. This study focuses specifically on the manifestation and articulation of RIT within England's 'Teaching Excellence Framework' (TEF). Despite the widely asserted benefits of integrating research into teaching, the literature reveals a lack of detailed analysis on how these 'benefits' are effectively translated into student learning enhancements.

This paper therefore seeks to examine how RIT is articulated and exemplified in the high-stakes 'provider' submissions made by universities as part of England's 2023 TEF. Through thematic analysis, this study explores the presence and patterns within the submission statements of Russell Group universities, a self-selected group of 24 'world-class' universities located within the United Kingdom. This analysis will allow the interpretation of unstructured qualitative data for a cluster of institutions, chosen based on their 'self-proclaimed' (Boliver, 2015) representation of a homogenous group of 'research-intensive' universities, who through their submissions are endeavouring to articulate the relationship between research and teaching in pursuing 'teaching excellence'.

Research informed Teaching

Whilst Humboldt's 19th-century 'Bildung' promoted a holistic connection between research and education (Schimank & Winnes, 2000) the relationship between teaching and research has remained "fuzzy" and "elusive" (Tight, 2016). Hattie and Marsh (1996) argued that the commonly assumed symbiosis between the two functions may be more mythical than empirically grounded, asserting a "zero relationship" between research productivity and teaching effectiveness. However, they also acknowledged that effective connections between the two functions must be consciously constructed. Jenkins et al. (2008) and Elken and Wollscheid (2016) similarly contend that research and teaching do not naturally align and that, in practice, they often compete for institutional and individual resources. Studies since the 1980s consistently demonstrate either no or only a weak positive correlation between the quality of teaching and the quality of research (Van Dijk et al., 2020; uz Zaman, 2004). Yet, despite the concerns RIT remains a frequently invoked, yet seldom clarified, term often employed to assure diverse stakeholders that teaching and research coexist in universities in a thoughtfully integrated, symbiotic, and mutually beneficial manner for both academics and students.

Despite RIT remaining nebulous and ill-defined, its deployment across higher education discourse is frequent, often functioning more as a rhetorical device than as a substantive or clearly articulated practice. This was recently exemplified by the new Labour government's Minister for Higher Education, Jacqui Smith, who stated: "In fact, of course, attracting the brightest students from around the world is good for our own students too, as it leads to more university places for them and a strong culture of research-informed teaching across our campuses, as well as lifelong friendships" (2024). While seemingly benign, this statement illustrates how "empty signifier" terminology such as RIT is readily absorbed into political rhetoric, embedding assumptions, in this instance, aligning the value of RIT with the economic and cultural benefits of international student recruitment. While political speechwriters might be forgiven for utilising broad, catch-all language, the continued and uncritical invocation of RIT within the university sector remains problematic. Its habitual and tenuous strategic use often serves to legitimise a wide array of institutional agendas, despite a lack of shared understanding or clear conceptual foundation.

Alongside the proliferated use of the 'research-teaching nexus', scholars have endeavoured to conceptualise and apply frameworks to understand how research can inform teaching practice. Griffiths (2004) foundational work identified four distinct models: research-led, research-based, research-informed, and research-oriented teaching, which Malcolm (2014) notes have become the basis for many subsequent attempts to enhance the research-teaching nexus. Building upon this foundation, Healey (2005) developed a matrix that organizes these models by emphasizing research as either process or content, and positioning students as either participants or audience of research. This conceptual development has been further refined by Visser-Wijnveen et al. (2010), who distinguished five profiles based on academics' ideal images of the research-teaching nexus: teaching research results, making

research known, showing what it means to be a researcher, helping to conduct research, and providing research experience. These profiles consider whether the relationship is unidirectional or reciprocal, and whether the focus is on knowledge, skills, disposition, or a combination thereof.

Research-led teaching, therefore operates as a term used interchangeably, with a further manifestation of RIT involving curriculum content being directly informed by current or previous disciplinary research (Holbrook & Devonshire, 2005). This approach is typically established through academics drawing on their personal research in course design or contextualizing the latest research within its historical framework. However, this model has been criticized for its passive nature, essentially treating students as recipients of research outputs rather than active participants in the research process. In contrast, research-oriented teaching focuses on the process of knowledge construction, teaching students how to conduct research by introducing them to methodologies, methods, and techniques (Healey, 2005). This approach recognizes that understanding research as a process is as valuable as understanding research outcomes.

Research-based teaching, a further iteration of the research-teaching nexus, represents a more active engagement model, emphasizing students' participation in primary research and knowledge acquisition through direct involvement (Jenkins & Healey, 2005). This can include designing and executing fieldwork-based projects, conducting policy analysis, or undertaking research to solve practical challenges in professional settings. Students consistently express preferences for these hands-on opportunities, suggesting that active engagement with research processes may be more meaningful than passive consumption of research outputs (McLinden et al., 2015; McLinden, 2018). Research-tutored teaching, meanwhile, involves learning through critiquing others' research, helping students develop cognitive and intellectual skills through critical evaluation of existing scholarship (Healey et al., 2005; Jenkins et al., 2008)

A newer category, impact-informed teaching, has also emerged as universities increasingly focus on demonstrating the societal relevance of their research. This approach utilizes research impact as the starting point for classroom instruction, connecting academic knowledge to real-world applications and outcomes. Additionally, the concept of RIT as a general term encompasses teaching that is informed by both disciplinary knowledge and educational research, with some academics arguing that all higher education teaching should inherently be research-informed (Brew, 2012).

The purported benefits of RIT are extensive, encompassing both student learning outcomes and academic practice improvements. For students, RIT is claimed to develop research and inquiry skills, with lecturers serving as role models who share their research experiences (Joseph-Richard & Jessop, 2020). The approach is said to enhance critical thinking abilities, supporting students in analysing problems and making decisions when confronted with complex knowledge. Academics therefore aim for their students to acquire critical attitudes, questioning assumptions and engaging in meta-thinking processes that reflect genuine scholarly inquiry.

RIT is also positioned as preparation for future professional practice, equipping graduates to interact with the complexities of a knowledge society and base their professional actions on evidence (Hajdarpasic et al., 2015). This approach is frequently framed as developing evidence-based practice, recognizing research methods as specific competencies for professional application. The provision of authentic experiences through initiatives such as undergraduate e-journals offers students valued publication experiences, while involvement as co-researchers or active contributors in action research projects provides genuine research participation opportunities (Jensen & Dikilitas, 2025).

For academic practice, RIT has the potential to transform curriculum design and planning into research-led activities, allowing academics to integrate their specialisms and current research evidence into module creation (Brew & Mantai, 2017). Teaching delivery can be transformed into relationship-based classroom interactions focused on research methods and critique, while assessment practices become evidence-informed and inquiry-focused. Assessments can be designed to align with research topics, allowing for differentiation based on the complexity of readings and materials used by students. This approach encourages academics to develop collaborative learning environments and make their support activities research-based, with some academics converting assessment submissions into publications, fostering meaningful student-staff partnerships (Healey et al., 2014; Healey & Healey, 2024). Engaging in RIT is subsequently characterised as fundamental to university practice, supporting continuous professional development and requiring what Joseph-Richard et al. (2020) consider a RIT mindset, characterized by intellectual curiosity, disposition to co-produce knowledge, and commitment to research-informed practice.

Despite these claimed benefits, the integration of research and teaching faces significant challenges that question the assumed frictionless symbiosis between these functions. The interconnections between research and teaching are complex, and integration does not occur automatically (Robertson, 2007). Strategic intent, scholarly commitment, pedagogical awareness, appropriate policy frameworks, adequate resource allocation, and facilitative contexts are crucial for meaningful integration, yet these conditions are often absent or inadequately developed in institutional settings.

Competition for academics' time and priorities further presents fundamental and persistent challenges in achieving RIT, with numerous studies indicating that academics consistently prioritise their own research activities, such as publishing peer-reviewed papers and securing external funding, over teaching and learning responsibilities, particularly in relation to job satisfaction and career advancement (Cretchley et al., 2014). This trend, observed across a range of universities and academic roles, reflects structural conditions rather than individual preferences. Policies governing the Research Excellence Framework (REF) and Teaching Excellence Framework (TEF) have further entrenched this separation by linking institutional funding and prestige to discrete performance indicators (McKinley et al., 2021). As Bello et al., (2021) argue, reputational and reward systems continue to favour research, generating a scarcity of time, energy, and sustained commitment to pedagogical development. This 'scarcity' model, alongside the 'differential personality' and 'divergent reward systems' identified by

Hattie and Marsh (1996), exacerbates tensions between research and teaching, leading to diminished pedagogical engagement and the formalisation of bifurcated academic pathways, where teaching-only and research-only roles become institutionalised rather than integrated.

Leišytė (2019) found that in the UK and Netherlands, performance management strategies led to increased time spent on research at the expense of teaching, with significant implications for gender equality in promotion prospects. This suggests that policy frameworks intended to enhance both research and teaching quality may inadvertently create competitive environments that undermine the integration they purport to support. Whilst empirical evidence regarding the relationship between research activity and teaching quality presents mixed findings that challenge assumptions about their natural alignment. While some scholars assert positive relationships between teaching and research (Brew & Boud, 1995), others argue that such assertions overlook the zero-correlation problem identified in meta-analytical studies (Marsh & Hattie, 2002). Conflating performance in research with performance in teaching, based on publication metrics or student evaluations, is therefore an oversimplification of these indicators and leads to flawed assumptions about the means to achieving high quality teaching.

Further studies have also challenged assumptions that high-impact research translates to effective teaching. Coccorese et al., (2024) identified that academics publishing in elite journals tend to achieve lower teaching evaluations, suggesting that institutional prestige does not automatically translate to positive student experiences. Similarly, Bell and Brooks (2019) identified an inverse correlation between four-star research outputs and student satisfaction, particularly within Russell Group institutions. Whilst Prosser et al. (2008) suggests that academics who understand their subject matter deeply through research can provide higher quality teaching, but this requires an institutional shifting of emphasis from quantity of 'published' outputs to broader epistemological and student engagement within disciplines.

The dichotomy of the relationship between research and teaching is further exemplified by high student expectations, shaped by reputational research branding and subsequent disappointment due to limited academic availability or insufficient pedagogical engagement (Kane et al., 2008). These patterns are further complicated by National Student Survey data, which often reflects the broader institutional culture, resource distribution, and student perceptions of fairness rather than direct measures of teaching quality. The debate is further compounded by tensions between students stated preferences and their institutional choices. While students may express desires to be taught by professionally 'qualified' teachers, they frequently apply to research-intensive universities where such qualifications are less common and of a lower priority (Brown & Mazzarol, 2009; Palfreyman & Tapper, 2012). This suggests disconnections between students' perceptions of teaching quality and the branding of research-intensive institutions, indicating that assumptions about RIT occurring naturally in research-rich environments may be misplaced.

There is therefore a need to distinguish what RIT actually entails and how it can be achieved. Contemporary pressures on universities to excel in both REF and TEF has the potential to

simultaneously create and diminish opportunities across the research-teaching divide, with clear opportunities to deepen conceptualization and implementation. Paradoxically, government policies and institutional priorities increasingly compete to drive teaching and research along divergent trajectories, where crude and simplistic measures of performance reinforce separation while artificially promoting appearances of integration (McKinley et al., 2018). Therefore, whilst the aligning of teaching and research is often seen as advantageous in enhancing student learning, facilitating direct engagement with cutting-edge research, and strengthening students' research competencies, these purported benefits may frequently rest on tenuous assumptions and result in basic and contrived exemplification (Advance H. E., 2017).

Ultimately the gap between rhetoric and practice remains substantial, with academics noting lack of "actual parity" between institutional statements about linking research and teaching and lived experiences of attempting such integration (Simons & Elen, 2007). Both academics and students may lack shared understanding of what RIT truly entails and what the potential opportunities may exist. RIT has therefore emerged as a pervasive yet ambiguous term in discussions of 'teaching excellence', reflecting the performative nature of contemporary academic culture while promoting superficial engagement with the complexities of pedagogical excellence. Despite widespread use, the concept of RIT remains largely unexamined within the context of 'teaching excellence', serving multiple purposes while evading the analytical scrutiny necessary to substantiate its claims. Consequently, RIT rests on overly simplistic conceptions of student learning and effective pedagogy, aligning with what Lloyd (2009) describes as "blind faith" and what McKenzie et al. (2018) term as a "myth."

Teaching Excellence framework and provider submissions

The Teaching Excellence Framework (TEF) is a national scheme in the UK run by the Office for Students (OfS) designed to incentivise 'excellence' in teaching, learning, and student outcomes for higher education providers, ultimately influencing their reputations and offering a mechanism to inform student choice. The TEF emerged following the Conservative Party's 2015 election victory, which led to the Higher Education and Research Act of 2017 and the establishment of the Office for Students (OfS) on April 3, 2018. This formation marked the closure of both the Office for Fair Access (OFFA) and the Higher Education Funding Council for England (HEFCE) (Dandridge, 2019). The TEF's primary objective was "to ensure that all students receive an excellent teaching experience and that teaching and research are given equal status in higher education institutions" (Hubble, 2017, p. 5). This mission was rooted in the presumption that teaching quality within research-intensive universities was generally substandard and required improvement.

In the context of an increasingly regulated and market-driven higher education system, alongside a steep increase in tuition fees in 2012, the government aimed to be perceived as proactive in supporting the student 'consumers' of higher education who were facing significantly higher financial burdens.

Former Universities Minister Jo Johnson highlighted this concern by calling for the elimination of "lamentable teaching that must be driven out of our system" (Johnson, 2015). To address this, the TEF was designed around a set of metrics intended to assess 'teaching quality' across the sector, alongside assessment of institutions conducted by a 'panel of experts' that focuses on a provider's undergraduate academic programmes in order to arrive at single overall rating, alongside two additional ratings for 'student experience' and 'student outcomes'. The 'Olympic style' categories of either Gold, Silver, Bronze, or 'Requires improvement' are subsequently awarded, and remain valid for four years having significant implications for future funding and reputation.

During the assessment process the expert panel considers three main sources of evidence which includes a provider's own written submission (up to 25 pages), alongside an optional student submission (up to 10 pages), and a set of TEF indicators produced by the OfS which measure student experience (based on a National Student Survey), continuation, completion, and progression outcomes. Alongside these quantitative measures, the TEF requires each institution to submit a 25-page written report, known as the TEF provider submission. This document, often supplemented by an optional student submission, is a detailed 'showcase' of an institution's strategies and its capacity to foster student success across various demographics and academic disciplines. According to the OfS, the TEF panel evaluates these submissions in combination with the specified indicators, allowing them to assess "how far a provider delivers excellence for its mix of students and courses" (OfS, 2022, p. 26).

Given the limitations of both the data and statements, the TEF has emerged as a naïve, bureaucratic, and ultimately contrived performance-driven approach for classifying 'teaching excellence' in a sector which sets universities against one another in a high-stakes ranking system, based on minimal performance indicators. Deem and Baird (2019) argue that these rankings impose an artificial accountability structure based on a narrow set of causal metrics that lack a shared understanding or clear definition of what "teaching excellence" truly entails. The framework's limited scope and its reliance on potentially flawed metrics can inadvertently drive counterproductive behaviours in universities, creating a distorted sense of success and excellence based on compliance with skewed benchmarks rather than fostering genuine pedagogical improvement (Gourlay and Stevenson, 2017; Gunn, 2018)

Most recently, the TEF framework underwent significant modifications for the 2023 iteration, transitioning from its earlier subject-level pilot format (2018-2019) back to an institutional focus. In this version, the TEF maintained its "desk-based, expert review exercise," guided by a set of indicators developed by the OfS. These indicators emphasize student outcomes in areas such as continuation, completion, and post-graduation progression, where continuation rates measure the proportion of students who maintain their studies beyond their first year, while completion indicators track the percentage of students achieving qualifications within four years. Progression indicators are derived from the Graduate Outcomes (GO) survey, which records the employment or further study status of graduates 15 months post-graduation.

Thus, within the context of this research, the TEF provider submissions serve as a significant component, providing a rich source of evidence for both the institutional signposting of perceived "teaching excellence and impact evaluation practice" (Moore et al., 2017, p. 1). The provider submissions therefore reflect the institutions best efforts to externally articulate and substantiate their commitment and aspirations for teaching excellence within a highly competitive, performance-focused, and arguably significantly flawed and contrived framework.

TEF submissions

The sample of universities for this study were drawn from the 228 Higher Education providers that participated in the 2023 TEF 'awarding' process. More specifically, the focus was placed on the 24 Russell Group universities, which distinguish their 'status differentiation' (Boliver, 2015) within UK universities through marketing their research-intensive' missions, which collectively generates an annual research income of approximately £14.3 billion (Knuth et al., 2024). However, while the Russell Group consists of 24 institutions, this study specifically examined the 20 universities based in England, given that participation in the TEF is voluntary for institutions outside of England, thus the two Scottish, one Welsh, and one Northern Irish university within the Russell Group did not submit applications.

While these 20 institutions represent only about 10% of the total TEF submissions, they constitute 100% of England's Russell Group universities, where RIT would potentially be expected to be systematically embedded. This sample selection does not suggest that providers outside of the 'Russell Group' institutions do not engage in RIT. Rather, the rationale for focusing on these universities is that they offer a recognisable, albeit 'self clustered', sample in which the research-teaching nexus should, in theory, be operationalised. Equally, although the relationship between RIT and TEF award outcomes was not the primary focus of this study, it is notable that 7 of the 20 Russell Group institutions received a Gold rating under the TEF methodology, with the remaining 13 institutions awarded Silver. This means that approximately 35% of the Russell Group institutions attained a Gold rating, a proportion slightly higher than the overall average across the 228 participating universities, colleges, and higher education providers (OfS, 2024).

The key component of this research was therefore the qualitative analysis of the university provider submissions, which outline their ambitions, justifications, and 'evidence' of teaching excellence. These high-stakes, 25-page submissions form a crucial part of the TEF process and may follow either a structured template, with four headings (Provider Context, Student Experience, Student Outcomes, and References), or an institution-specific layout. Additionally, providers are given guidance on the scope, format, and content of their submissions (OfS, 2022). Whilst the precise influence of these written submissions on the final TEF awards remains unclear, preliminary analysis indicates that they contribute to the panel's decision-making process, as reflected in the panel's written feedback.

Previous research suggests that provider submissions have, in some cases, played a role in elevating institutions to a higher rating (Gunn, 2018). Furthermore, concerns have been raised about the potential for TEF submissions to be strategically crafted to emphasize particular themes in ways that may not fully reflect institutional realities (Matthews and Kotzee, 2019). Issues such as inconsistency, ambiguous terminology, and varying interpretations of 'teaching excellence' across institutions have also been identified (Moore et al., 2017). Thus, TEF submissions serve not only as institutional statements about teaching priorities but also as influential documents that collectively shape sector-wide discourse on what is valued in higher education. Over time, these submissions contribute to constructing a shared narrative of 'teaching excellence', one that may, in some cases, reflect an idealised or strategically curated vision rather than a fully representative account of institutional practice. Ultimately, the provider submissions offer a unique and rich source of analysis, as they encapsulate universities' self-reported aspirations and evolving conceptualisations of teaching excellence.

Methodology

The research adopted a two-phase thematic analysis approach. The first phase in the initial iteration was to identify and summarise the explicit manifestations of how universities chose to convey explicit representation of RIT within their TEF submissions. The second iteration would then attempt to uncover a more nuanced implicit identification of the positioning of research within teaching using a thematic analysis approach.

Braun and Clarke's (2006) thematic analysis was selected as the means to identify, analyse, and report patterns and themes in the TEF provider qualitative submission data. The standard six-step process (Naeem et al., 2023) was modified to provide deeper insights into RIT (Table 1). The analysis was conducted by a single researcher, an approach that is justified when the researcher possesses deep familiarity with both the context and data, combined with field immersion and conceptual sensitivity (Morse, 1994). This familiarity enables more nuanced engagement with patterns, meanings, and latent themes, moving beyond mechanical coding to active interpretation and meaning construction (Braun and Clarke, 2021). A key element of this real-time analysis involved remaining attentive to phenomena during data analysis, identifying potential codes and themes, and making preliminary statements that were refined into a final conceptual model (Naeem et al., 2023).

Table1: Modified six step thematic analysis process

Step 1: Familiarisation with the data, and Selection of text	This involved downloading and reading the 20 provider submissions, approximately 500 pages in total. During this 'deductive' first phase phrases, sentences and framing relating to research were selected.
Step 2: Selection of keywords and phrases and development of global 'big idea' themes	During this second phase analysis key words, phrases and framing variations linked to 'research informed teaching' alongside the context they were located were identified for each submission and categories under two emerging global themes of 'ambitions' and 'assumptions'.
Step 3: Coding	Codes were assigned to phrases, sentences and keywords which summarised the positioning of research under the global theme of 'assumptions'.
Step 4: Theme Development.	Using an inductive grounded approach, themes were grouped based on emerging underlying themes from across the provider submissions.
Step 5: Conceptualization through interpretation of codes and emergence of sub-themes.	Conceptualization involved understanding, refining and defining concepts emerging from the data.
Step 6: Development of conceptual and overarching theory.	The final phase involved identifying a conceptual clarity and theorising the outcome and contribution to knowledge.

Within the first phase iteration the analysis sought to identify "global themes", that seek to illustrate "big ideas" emerging from the scrutiny of the text (Attride-Stirling, 2001). Such global themes therefore aim to characterise references to the interplay of research and teaching through framing statements about the importance, prominence and multifaceted nature of research and teaching within the university provision.

During this preliminary coding phase, a structured tabular thematic analysis was expedited using spreadsheet software permitting inductive, deductive or hybrid approaches to theme development. Such logistical processes are well suited to working with the large samples that can be achieved when analysing text data and can be used to conduct purely qualitative analyses transforming the complex and

extensive textual data "into a theoretical form and assists in identifying elements related to the research questions" (Naeem et al., 2023 p. 4). A hybrid approach was implemented, meaning the data was coded, or categorised using a 'ground up' approach without a preconception of what the codes would identify, but with a pre-existing insight which facilitated focussing on capturing and identifying the tensions, contradictions, assumptions and anomalies related to a research teaching nexus.

Analysis and conceptualisation of ambitions and assumptions

Within the inductive coding analysis, theme development was deployed based on identifying emerging patterns and assigning groups of codes based on semantic (surface meanings of data) or latent (underlying ideas) concepts prior to looking beyond the surface of the data (Braun and Clarke, 2006). Within this first stage of macro thematic analysis, two distinct global themes began to emerge which were able to be categorised as 'ambitions' and 'assumptions', representing both the overt explicit signposting of RIT alongside the implicit, at times contrived linking of research and teaching.

Within the global theme of "ambitions," these frequently occurring explicit statements provide little nuance in explaining or understanding how RIT is actually operationalized or theorized. The typical "loose" and explicit sub-themes illustrate how universities frame positive RIT "ambitions" as key elements within their TEF submissions, yet the scale or methods of consistent implementation often remain vague or undefined. This lack of clarity is significant, as TEF awards are based on institutional performance, creating an expectation that RIT ambitions should be consistently realized across a university's provision. Nevertheless, within the context of TEF, rather than positioning research as a separate pursuit, institutions are strongly motivated to articulate the integration of research into the student experience, thus creating a narrative of a more engaging, challenging, and enriching learning environment. Consequently, eight themes emerged which can be considered to characterise the RIT 'ambitions' across provider statements which included:

- Cutting-Edge, Research-Driven Learning: Students benefiting from exposure to the latest research through research-led, research-rich, and research-informed teaching, ensuring an education built on cutting-edge knowledge and methodologies.
- Comprehensive Research Integration: Programmes allowing students continuous access to advanced knowledge and research methodologies during their studies.
- Active Participation in Research: Where students are themselves encouraged to become active researchers, engaging in inquiry, analysis, and hands-on projects that deepen their academic involvement.
- Programmes Shaped by Disciplinary and Pedagogical Research: Degree programs are informed

by the latest in both disciplinary research and educational scholarship, aligning academic content with current developments in the field.

- Exposure to World-Class Research and Expertise: students working alongside leading academics, providing intellectual stimulation and fostering a deep understanding of their discipline.
- Development of Critical Research Skills: Research intensive programs equipping students with essential skills in data analysis, research formulation, and project execution, supported 'capstone' projects.
- Enhanced Employability through Research Experience: Students gaining highly sought after employability skills such as critical thinking and problem solving alongside offering targeted research internships.
- Access to Research Facilities and Resources: Students benefitting from state-of-the-art facilities that support hands-on learning and experimentation, providing opportunities for exploration that enhance both academic and personal development.

Whilst the above explicit framing of RIT 'ambitions' would appear positive, the underlying and implicit positioning of how research within teaching is manifested to achieve such ambitions is less clear. Therefore, the further fine-grained analysis of the second global theme of 'assumptions' sought to uncover further sub themes that might provide a more nuanced insight into the implicit aligning of how the relationship of research to teaching was positioned.

Within the second global theme of 'assumptions' the emerging subthemes were again generated from naturally coalescing patterns that aligned with organic and evolving premises. Once the emerging theme headings were identified the data was revisited to classify any further examples that contributed to the refinement and confirmation of the final theme headings (Appendix 1) and defining concepts which included:

- Exposure, Proximity, and Osmosis: This theme reflects the assumption that RIT occurs through students' mere proximity to research, implying that through a process akin to "osmosis" student will learn through natural exposure.
- Power, Reputation, and Serendipity: Often, a university's research power and rankings are cited within an RIT context, relying on serendipity and institutional reputation as means by which students learn indirectly from research.
- Expenditure, Investment, and Facilities: Financial investments in infrastructure and resources are frequently highlighted, yet without clear explanations of how these investments directly contribute to student learning.
- Curriculum, Enhancement, and Pedagogy: While references are made to course design and teaching methods, there is often a lack of detail on how RIT is practically embedded. Research

is at times portrayed as a supplementary or as enhancement activity rather than an integrated pedagogical practice.

- Relinquishing, Contradiction, and Dichotomy: RIT discussions reveal contradictions, such as the rise in academic roles focused on teaching or scholarship, implying a reduction of emphasis upon research, alongside efforts to elevate teaching-focused career paths. There is also a potential loss of 'agency' as institutions increasingly seek external validation of teaching competence.
- Episodic, Bespoke, and Temporal Engagement: When RIT is exemplified, it is often through small-scale instances of "good practice" or short-term initiatives, rather than sustained, institution-wide efforts.

Given the TEF submissions from universities represent their best efforts to articulate teaching excellence, the explicit ambitions and underlying assumptions surrounding RIT emerge as a critical finding in this study. In particular within the initial analysis, it became apparent that references to RIT within TEF submissions could be conceptualized as existing in two distinct states. The first of these includes eight explicit ambitions for student learning within a 'research informed teaching' environment, which universities emphasize to frame the intended outcomes and beneficiaries of the research teaching nexus.

The second state encompasses implicit assumptions about how RIT functions to achieve teaching excellence. Within these assumptions, six themes emerge, indicating that the practical translation of RIT into action is often vague and lacks transparency, particularly concerning how these ambitions can be realized on a large scale. Consequently, achieving the ambitions of RIT based upon the underlying assumptions appear misaligned, as the underlying mechanisms for achieving teaching excellence are not clearly defined within the high stake's context of TEF submissions.

Whilst this analysis does not preclude sophisticated forms of RIT existing within Russell Group universities, the statements within the TEF submissions intended to substantiate the pursuit of teaching excellence through research reveal a set of implicit assumptions that often place teaching and research in a tenuous and contrived relationship with RIT ambitions. Overall, the conceptualization of RIT, as manifested in Russell Group universities' TEF submissions, illustrates a mismatch between stated ambitions and underlying assumptions.

Conclusion

This study critically examines how research-informed teaching is conceptualized and represented within the TEF submissions of Russell Group universities. Through this analysis, a clear disconnect emerges between the stated ambitions and the underlying assumptions that shape institutional narratives around RIT. This discrepancy raises fundamental questions about how universities construct the integration of

research into teaching, the assumptions that sustain these claims, and the practical implications of such positions in the pursuit of "teaching excellence." Moreover, the findings highlight how the TEF, designed to enhance and validate teaching, often fosters a superficial engagement with RIT, exposing significant limitations in its role as a true measure of teaching excellence.

The TEF submissions prominently feature ambitious assertions about the value of RIT in enhancing student learning within "research-rich" environments. Universities frequently position research as an essential driver of teaching excellence, claiming that exposure to research fosters academic curiosity and enriches curricula. However, despite arguments that the TEF strengthens the credibility of research into education and promotes RIT approaches (Pearce, 2019, p. 79), this study reveals a gap between these aspirational claims and the assumptions underlying their implementation.

Specifically, there is a notable absence of robust evidence or comprehensive frameworks demonstrating how RIT is systematically embedded across institutions or its tangible impact on student learning outcomes. Whilst there was no specific requirement within the TEF for institutions to articulate their strategic approaches to RIT, this research has identified how institution have decided to frame their ambitions around assumptions. As a result, the relationship between research and teaching can be considered as rhetorical rather than grounded in well-defined pedagogical practice. Consequently, a crucial finding of this study is the identification that implicit assumptions underpin the presentation of RIT in provider submissions.

Whilst the assumptions that emerged from the analysis of TEF statements indicated that research inherently enhances teaching quality and student learning, such claims are seldom accompanied by clear justification, evidence, or articulation of the mechanisms through which this influence operates. Rather than providing concrete examples of how research translates into effective teaching, institutions frequently depict RIT as a hallmark of excellence based on conceptual appeal rather than empirical validation. Consequently, the portrayal of research as a foundational pillar of teaching excellence lacks specificity, leaving the research-teaching relationship ambiguous and weakly substantiated.

Through thematic analysis of 20 Russell Group TEF submissions, six key themes emerge that illustrate the underlying assumptions about RIT: Exposure, Proximity, and Osmosis; Power, Reputation, and Serendipity; Expenditure, Investment, and Facilities; Curriculum, Enhancement, and Pedagogy; Relinquishing, Contradiction, and Dichotomy; and Episodic, Bespoke, and Temporal Engagement. These themes reveal the varied and, at times, contradictory ways in which RIT is framed, suggesting that the relationship between research and teaching is often contrived and artificially constructed. While TEF submissions consistently emphasise the value of research in supporting teaching excellence, they provide little evidence of how this directly translates into improving student learning. This disjunction perpetuates an implied connection between research and teaching that remains conceptually fragile and poorly defined.

This analysis, therefore, reveals a fundamental dissonance (Festinger, 1957) within the institutional narratives, where ambitious claims are undermined by inconsistencies, contradictions, and dichotomies

in the assumptions about RIT. One striking irony being that, despite Russell Group universities' emphasis on 'research excellence', their TEF submissions frequently lack a rigorous, research informed approach to teaching. The absence of a robust evidentiary foundation in these submissions stands in stark contrast to the research intensity these institutions champion.

A further paradox emerges in how universities frame RIT: on the one hand, exposure to leading researchers is presented as a key asset to student learning; on the other, the increasing shift toward 'teaching-focused' academic roles within these institutions (McIntosh et al., 2021) raises questions about the sustainability of the illusive RIT aspirations. This trend disrupts the basis of the research-teaching nexus, as the expansion of teaching-focused positions ultimately reduces opportunities for direct engagement between students and active researchers. Additionally, many TEF submissions emphasize external validation as a marker of teaching excellence, positioning accreditation and rankings as key indicators of quality. This reliance on external benchmarks introduces a contradiction: while universities advocate for RIT, they simultaneously outsource endorsement of teaching to external bodies, further complicating the RIT narrative.

Ultimately, the thematic analysis of Russell Group TEF submissions underscores a critical discrepancy between the explicit claims about RIT and the assumptions underpinning these claims. While institutions promote themselves as integrating research into teaching, the lack of specific evidence and theoretical frameworks weakens these assertions, highlighting the need for a more transparent and critical engagement with RIT. Despite its limitations, the TEF plays a crucial role in shaping the discourse around teaching excellence, and universities must ensure that their RIT strategies are deliberate, well-substantiated, and subject to rigorous critical scrutiny. Without such engagement, the pursuit of teaching excellence through RIT risks being built on idealized narratives rather than demonstrable practices. To truly fulfil the ambitions articulated in the TEF submissions, institutions should move beyond implicit assumptions and provide concrete, evidence-based accounts of how RIT is achieved and how it enhances both teaching quality and student learning. Without such scrutiny, RIT remains a conceptual aspiration rather than a tangible contributor to teaching excellence.

Furthermore, the ambiguous messaging surrounding RIT within TEF submissions reveals inherent limitations within the TEF framework itself. By incentivizing high-stakes assessments, the TEF encourages institutions to engage in rhetorical posturing rather than meaningful exploration of how research and teaching intersect. If the TEF is to truly elevate teaching alongside research, it must set clearer expectations and establish rigorous criteria for evaluating the research-teaching relationship. By framing teaching excellence as a fixed, quantifiable outcome rather than an evolving, multifaceted process, the TEF risks overlooking the diverse and often intangible elements that contribute to high-quality education. As universities strive to align with TEF requirements, the discourse around teaching excellence becomes increasingly shaped by market-driven narratives, where "excellence" is reduced to a narrow set of metrics rather than a substantive commitment to pedagogical development and a broader culture of enquiry and reflection. The existing performative culture consequently fosters superficial

engagement with meaningful educational enhancement, prioritizing compliance over authentic improvements in teaching and learning.

While the TEF offers a notionally structured accountability mechanism, its design ultimately undermines its stated goals, rendering "teaching excellence" more of a regulatory construct than a genuine effort to strengthen the research-teaching nexus. Despite its potential to reconcile the competing demands of research and teaching, the high-stakes nature of the TEF creates a paradox: the pressure to meet externally imposed standards distorts institutional behaviour, shifting focus away from nuanced, context-specific pedagogical strategies. In this regard, the TEF's performative tendencies may obscure rather than resolve the fundamental challenges of integrating research into teaching, reducing complex educational outcomes to overly simplistic and misconstrued metrics. Thus, while the TEF aspires to elevate teaching standards and position teaching alongside research, its competitive nature and reliance on limited indicators may, paradoxically, inhibit rather than support these objectives within the UK's higher education landscape.

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Appendix 1. Global theme 'assumptions' initial coding and final themes

1. Initial coding terms	2. Grouping of codes	3. Final themes
1. Absence of how 2. Accreditation 3. Action research 4. Active participants 5. Apprenticeship 6. Awards and recognition 7. Awards for teaching 8. Building and facilities 9. Capstones 10. Co-authors 11. Collaboration 12. Convenience 13. Curricula 14. Cutting edge facilities 15. Dichotomy 16. Elevation of teaching 17. Embedded 18. Enhancement 19. Expenditure 20. Exposure 21. External validation 22. Fellowships 23. Final projects 24. Forefront of field 25. Hands on research 26. Immersion 27. Integrated 28. Interdisciplinary 29. Internationally excellent 30. International recognition 31. Internships 32. Investment 33. Monopoly 34. New investments 35. Nobel Laurette 36. One off 37. Outsourcing 38. Parity of esteem 39. Parity of teaching and research 40. Partnerships with academics 41. Participation 42. Pathways 43. Pedagogy 44. Peer reviewed research 45. Personalised model 46. Physical learning and teaching environment 47. Practicing researchers 48. Presence of others 49. Prior standing 50. Promotion 51. Ranking 52. REF 53. Research active academics 54. Research credentials 55. Research culture 56. Research environment 57. Research intensity 58. Research methods 59. Research partners 60. Research power 61. Research quality 62. Research reputation 63. Resources 64. Scholarship 65. Serendipitous 66. Shifting contracts 67. Small numbers 68. Status 69. Student publishing 70. Sustained interaction 71. Thousands and Millions 72. Questionable synergy 73. Teaching and scholarship 74. Teaching and scholarship 75. Teaching focussed 76. Teaching Specialists 77. Temporal 78. Transitory 79. Teaching Subservience 80. Unfounded 81. Vacation studentships 82. Working alongside 83. World leading	Absence of how Active participants Apprenticeship Collaboration Exposure Hands on research Internships Participation Practicing researchers Presence of others Research active academics Research partners Sustained interaction Working alongside	Exposure, Proximity and Osmosis
	Awards and recognition Forefront of field Interdisciplinary Internationally excellent International recognition Nobel Laurette Peer reviewed research Prior standing Ranking REF Research credentials Research culture Research environment Research quality Research power Research reputation Serendipitous Status World leading	Power, reputation and serendipity
	Building and facilities Cutting edge facilities Expenditure New investments Investment Physical learning and teaching environment Resources Thousands and Millions	Expenditure, investment and facilities
	Capstones Curricula Embedded Enhancement Final projects Immersion Integrated Pedagogy Research intensity Research methods Unfounded Vacation studentships	Curriculum, Enhancement and Pedagogy
	Accreditation Action research Awards for teaching Convenience Dichotomy Elevation of teaching External validation Fellowships Monopoly Outsourcing Parity of esteem Parity of teaching and research Pathways Promotion Questionable synergy Shifting contracts Scholarship Teaching and scholarship Teaching focussed Teaching Specialists Teaching Subservience	Relinquishing, contradiction and dichotomy
	Co-authors One off Bespoke Partnerships with academics Personalised model Small groups small numbers Student publishing Temporal Transitory Tutorials Vacation studentships	Episodic, bespoke and temporal engagement

Geopolitics and International Higher Education: Concepts, knowledge diplomacy and security policies, and future agenda

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Abstract. The term "geopolitics" is increasingly invoked in higher education research, yet it is often used loosely, creating conceptual ambiguity that obscures underlying mechanisms and effects. This article addresses this gap by clarifying geopolitics in relation to international higher education and analyzing the policy levers through which major global actors shape academic mobility, research collaboration, and knowledge flows. We present the case of knowledge diplomacy and knowledge security to demonstrate how geopolitics affect cooperation and contestation in global higher education. Drawing on a comparative review of policy developments from 2018 to 2025, we examine regulatory measures from the United States, China, the European Union, and other influential nations, focusing on knowledge security instruments. Key examples include the US CHIPS and Science Act and China's Export Control Law. We show that geopolitics constitutes a defining context for higher education, re-territorializing knowledge networks, securitizing emerging research domains, and imposing compliance requirements that reshape institutional practices. We conclude by proposing a research agenda to analyze global power dynamics, strategic competition, and their implications for international cooperation, institutional autonomy, and individual agency.

Keywords: geopolitics, international higher education, policy and practice, collaboration and *competition, internationalization*

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Introduction

In higher education studies, "geopolitics" has become frequently invoked to frame academic discussions. In the past 5 years, more than 200 articles indexed on the Web of Science included the keywords "geopolitics" and "higher education". Yet despite its frequent use, the concept often lacks definitional precision. Scholars have observed that the term is sometimes applied "superficially or even sensationally to higher education studies" (Moskovitz & Harden-Wolfson, 2023, p. 150). Too often, researchers treat geopolitics as a taken-for-granted backdrop, which risks ambiguity in problem framing and inference.

A review of the literature reveals at least three overlapping uses of the term. First, geopolitics is often employed as shorthand for *political rivalry*. This framing is evident in analyses of rising powers that challenge the US-led international order (Rizvi, 2022), such as discussions of the US–China "new Cold War" (Schindler et al., 2024; Wen & Wang, 2022) and the Russia–Ukraine war (Tamtik & Felder, 2024). Second, geopolitics is invoked as a *macro-context*, shaping the multipolar-world flows of academics and knowledge (Huang, 2025; Marginson, 2025). Third, it is used as an *analytic lens* to examine policy instruments through which states operationalize security concerns, for example, visa regulations, export controls, or funding restrictions (Shih et al., 2025).

By conceptualizing geopolitics as a constitutive context, this paper integrates these dimensions. Geopolitics is simultaneously about rivalry, structural background, and policy instruments. It actively reshapes the logic, incentives, and constraints within which international higher education unfolds. Clarifying this concept strengthens analytical precision and enables systematic comparison across national cases, avoiding both overgeneralization and purely rhetorical deployment.

Accordingly, this paper addresses three guiding questions:

1. How has the concept of geopolitics traveled into higher education research, and how has it been interpreted?
2. What exemplary geopolitical policies have national governments adopted that reshape the international higher education field?
3. Given rapidly changing geopolitical realities, what analytical considerations should guide research design and interpretation in higher education studies?

To answer these questions, we map the mechanisms through which geopolitics manifests in the sector: via regulatory regimes, security-oriented governance, market reconfigurations, and shifting mobility pathways. We present the case of knowledge diplomacy and knowledge security and analyze these pairing concepts and related policies to capture the paradoxical existence of openness and protectionism that defines the current geopolitical currents in higher education. We aim to provide scholars with a clearer conceptual vocabulary and an operational analytic toolkit for engaging with geopolitical dynamics, thereby enabling more rigorous study design and policy-relevant interpretation in an era of heightened strategic competition.

Geopolitics: Concepts and evolution

1. The Geopolitical Tradition and Critical Geopolitics

The term *geopolitics* has long been described as "polysemous" and "a convenient fiction" that fuses geography and politics in multiple ways, carrying varied and sometimes contradictory meanings (Dalby & Ó Tuathail, 1996). Coined by Rudolf Kjellén in 1899, the term originally linked political power to environmental and spatial conditions such as climate, topography, arable land, and access to the sea (Dittmer & Sharp, 2014).

At the turn of the 20th century, technological advances brought by the Industrial Revolution, including railways, steamships, aircraft, telegraphy, and modern weaponry, interacted with large-scale geographical features to reshape state behavior and international competition. These innovations weakened traditional geographic constraints on power projection, enabling states to exert influence across distant regions and stimulating new geopolitical theories.

During this period, classical geopolitical thinkers emphasized geography's decisive role in shaping power. Alfred Thayer Mahan advanced the *Sea Power Theory*, contending that nations with strong navies and control of strategic maritime routes would dominate world politics, as oceans functioned as the lifelines of global trade and military power. Halford Mackinder later challenged sea power supremacy by proposing the *Heartland Theory*. He argued that the vast railway-accessible interior of Eurasia was the key to global dominance (Dalby et al., 2006). In the 1940s, Nicholas J. Spykman adapted Mackinder's framework but shifted attention to the *Rimland*—the coastal areas encircling the Heartland—where sea and land power intersected, positioning it as the decisive arena for global control.

In more modern times, Henry Kissinger popularized the term "geopolitics" as a synonym for world politics, or an approach to international relations. Through a realist lens, Kissinger conceived the competition and struggles for primacy amongst the superpowers (Ó Tuathail, 1994). Focusing on power, geopolitics is understood as the struggle over the control of geographical entities (the places, regions, territories, scales, and networks) with an international and global dimension, and the use of such geographical entities for political advantage (Flint, 2006: 36).

From the 1980s onward, however, the concept was critically reexamined. "Critical geopolitics" emerged during the Cold War as scholars challenged the Reagan administration's foreign policy in Central America (Dalby et al., 2006). Drawing on Michel Foucault's notion of power/knowledge, critical geopolitics treated geopolitics not as an objective reality but as a discourse: an assemblage of ideas and representations that shape how world politics is understood and practiced (Ó Tuathail & Dalby, 1998).

With intensifying globalization and the rise of non-state actors, scholars such as Gearóid Ó Tuathail and Simon Dalby emphasized the *socially constructed* nature of geopolitics. They deconstructed geographical determinism, arguing that geopolitical practices stem from shifting constellations of competing discourses, which remain open to modification. More recently, the field has moved toward what some call

"constructive critical geopolitics." Informed by critical theory, this approach goes beyond deconstruction to advocate *normative* positioning and the *construction* of alternative visions for international politics (Kurfürst et al., 2024).

This intellectual trajectory underscores that traditional geographical entities: territories, natural resources, and infrastructure, remain crucial to global power distribution. Yet it also highlights how non-traditional domains, such as cyberspace, demographic shifts, cultural capital, technological innovation, and educational systems, increasingly provide states with new strategic advantages.

2. Geopolitics in and of Higher Education

The preceding discussion situated geopolitics primarily within human geography and international relations. Building on this foundation, scholars of higher education have adopted varied approaches to conceptualize the *geopolitics of higher education*. Recent work emphasizes that the term is itself contested and socially constructed, rather than fixed or technocratic (Moskovitz & Harden-Wolfson, 2023).

Drawing from critical geopolitics, higher education scholars challenge the assumption that universities are "naturalistic," "depoliticized," or "technocratic" institutions (Mosio & Kangas, 2016, p. 271). Instead, higher education is framed as a strategic arena in which state and non-state actors pursue political, economic, and cultural goals (Foucault, 2007; Jessop, 1990; Mosio & Kangas, 2016).

This debate resonates with broader discussions about academic freedom and institutional neutrality. The Chicago Principles, articulated in the 1960s and 1970s and formally adopted by the University of Chicago in 2016, assert free academic expression as a guiding principle. More recently, Harvard University invoked the idea of neutrality in response to geopolitical tensions. As de Wit and Altbach (2024) observe, however, neutrality is increasingly difficult to sustain in an era when knowledge itself functions as a central global resource.

Higher education is thus embedded in the wider political economy of the state and the capitalist economy. Loyalty to the nation, the reproduction of epistemic and material structures of contemporary capitalism, and even the cultivation of patriotic identities is all implicated in what counts as geopolitics in and of higher education (Mitchell, 2003; Mosio & Kangas, 2016; Müller, 2011).

While power and competition remain core themes, contemporary analyses also underscore the co-constitutive roles of cooperation and horizontality alongside hierarchy and rivalry. Long-term asymmetries, emergent multipolarity, and regionally differentiated dynamics shape outcomes across higher education systems (Cantwell & Grimm, 2018; Hartmann, 2021; Marginson, 2025). Drawing on Massey and Lefebvre, Marginson (2025) situates higher education within space–power relations, emphasizing inequality, hegemony, and multipolarity as defining forces. He argues that geopolitics may be understood as "institutionalized relations of power in the regional and global scales" and that it entails "cooperation and horizontality as well as competition and hierarchy" (p. 10).

To link macro-level shifts with meso-level policy and micro-level practice, the SAIOS framework,

"Scales, Agents, Interests, and Opportunity Structures", offers a useful heuristic (Moskovitz & Harden-Wolfson, 2023). Extending *glonacal* thinking (Marginson & Rhoades, 2002), SAIOS specifies who acts (e.g., ministries, universities, firms, intermediaries), which interests are mobilized (economic, political, cultural, identity), and which opportunity structures enable or constrain collaboration (regulations, discourse, social justice movements). In doing so, it aligns a critical geopolitics lens with empirical analysis, illustrating how discourses and governance practices materialize geopolitical logics in institutional decisions on partner selection, research agreements, and mobility programs.

3 The Multi-level Geopolitical Impact Pathways

Building on the SAIOS framework (Moskovitz & Harden-Wolfson, 2023) and the updated glonacal perspective (Marginson, 2022), we conceptualize geopolitics as cascading through multiple levels to shape international higher education. To further dissect this multi-layered transmission of influence, *Table 1* maps how global dynamics translate into tangible effects across global, regional, national, institutional, and individual levels. The key is not only the presence of geopolitical pressures at each level but also their interaction across scales.

Table 1. Multi-Level Pathways of Geopolitical Influence on International Higher Education

Levels	Domains of Influence	Effects
Global System	Strategic rivalry and global governance (UN, WTO, G20, UNESCO)	- Great-power rivalries (US–China, EU–Russia) reshape research and funding frameworks - Climate accords and G20 agendas push universities toward sustainability and skills alignment - Sanctions and exclusion (e.g., Russia in Horizon Europe) reconfigure collaborations
Regional Order	Integration and security frameworks (EU, ASEAN, AU, Mercosur, GCC, Nordic Council)	- EU Erasmus and AU CESA institutionalize mobility and credit recognition - Regional conflicts (Russia–Ukraine, Gulf rivalries) disrupt campuses and risk assessments - Latin American and Nordic frameworks facilitate academic networks and policy transfer
National Policy	Diplomacy, regulation, and research security	- Scholarships and cultural institutes project soft power (Saudi KASP, Brazil's Science Without Borders) - Visa screening and export controls restrict mobility and sensitive fields - National reforms (India's NEP 2020) open/close pathways for transnational education
Institutional	Governance, partnerships, and positioning	- Middle Eastern hubs (Qatar's Education City, KAUST) leverage geopolitics to host global campuses - African and Latin American universities join regional and global research consortia - Risk management offices monitor compliance with sanctions, data security, and research integrity
Individual	Mobility choices and identity	- Displaced and refugee scholars (Ukrainian and Syrian) rely on regional protection schemes - African students reorient toward China, Turkey, or intra-African mobility - Latin American scholars pursue partnerships via linguistic/cultural ties with Europe - Students' sense of belonging shaped by geopolitical narratives and visa regimes

At the global level, rivalries among major powers and shifts in world order recalibrate multilateral norms and architectures, redefining the balance between openness and risk (Marginson, 2025). For instance, while US–China competition and decoupling are highly visible, other global dynamics, such as Russia's exclusion from Horizon Europe after the invasion of Ukraine, or the role of climate accords like the Paris Agreement, have restructured knowledge flows and funding priorities.

At the regional level, institutionalized frameworks and conflicts both mediate cooperation and competition. In promoting cooperation, harmonization, and regionalization, the EU's Erasmus program is a long-standing model of regional mobility (de Wit & Wang, 2024), while the African Union aims to promote intra-African collaboration *and realize the right for all children, youth, and adult* through the recent *The Continental Education Strategy for Africa 2026-35 (CESA 26-35)* (Africa Union, 2025). Similarly, Mercosur, the South American trade bloc formed in 1991 by Argentina, Brazil, Paraguay, and Uruguay, signed agreements on degree and education recognition, and the Nordic Council's higher education initiatives all illustrate how integration projects shape cross-border education policy (Kallo & Välimaa, 2025). In contrast, regional conflicts, such as those within the Gulf Cooperation Council or the war in Ukraine, directly constrain branch campus viability and research partnerships.

National governments also deploy higher education in pursuit of diplomatic and developmental goals. China's *Belt and Road Initiatives Education Plan*, Saudi Arabia's Vision 2030 Alignment and global education hub strategy, Brazil's *Science Without Borders*, and India's ongoing *National Education Policy 2020* all exemplify how national strategies reorient international mobility and partnerships, just as US visa screening or Chinese talent programs reflect geopolitical priorities (de Wit et al., 2022; Wen et al., 2022).

These macro- and meso-level conditions filter into institutional and individual practices. Middle Eastern countries see an increase in transnational education operations, for instance in the United Arab Emirates, as well as policies aimed to build up transnational higher education hubs, in particular Qatar's Education City and Saudi Arabia's KAUST, which leverage geopolitical positioning to attract global universities (Rottleb, 2023). The same phenomenon can be observed in Central Asia with Asian TNEs becoming more dominant, in particular Uzbekistan (Muratov & Wilkins, 2025). African and Latin American universities join regional research consortia to build capacity and visibility. Universities and research organizations translate geopolitical currents into operational strategies. These include selective partner-country engagement, tiered risk assessment, research-security offices, and training programs designed to insulate sensitive domains.

Finally, at the individual level, faculty and students encounter geopolitics most directly and vividly through lived experiences. Destination choices, collaboration opportunities, and compliance obligations are shaped by shifting regulations and perceptions of safety, trust, and access (Wang, 2022). At the individual level, mobility choices are also rerouted: African students increasingly choose China or Turkey as alternatives to Europe (Mulvey, 2021). Ukrainian scholars have been integrated into EU protection and mobility schemes (Herbst & Sitek, 2023). Latin American academics often pursue partnerships in Spain and Portugal due to linguistic and cultural ties. Their cultural identity and sense of belonging are shaped by

geopolitical narratives that illustrate how macro-structural shifts reverberate through micro-level academic life.

In short, the "spaces" of geopolitics in higher education are multi-scalar and enacted through rules, routines, and narratives that reconfigure collaboration design, mobility pathways, and knowledge governance (Moskovitz & Harden-Wolfson, 2023; Marginson, 2025). The table underscores that geopolitics is not an abstract background condition but a multi-scalar reality that materializes through policy levers, governance routines, and individual experiences.

The Case of Geopolitical Influence: Knowledge diplomacy and security

Building on the multi-scalar framework outlined above, geopolitical dynamics undoubtedly affect a wide spectrum of higher education structural domains and levels, and spread into areas of academic freedom, institutional autonomy, the provision of global public/common goods, and the Sustainable Development Goals. In this paper, we present the analysis of *knowledge diplomacy* and *knowledge security*.

These two dimensions are selected for their centrality to contemporary policy discourses and their dual representation of cooperation and contestation in global higher education. First, knowledge diplomacy, leveraging international education, research, and innovation (IHERI) programs to strengthen international relationships and vice versa (Knight, 2022). The concept of knowledge diplomacy encapsulates the collaborative, bridge-building function of international higher education. Second, knowledge security, which reflects the safeguarding and even the growing politicization of knowledge flows, intellectual assets, research integrity, partnerships, and data governance. Theoretically, the two correspond to the dialectic between the production of *global public goods* through transnational collaboration and the assertion of *national sovereignty* over the production, circulation, and protection of knowledge.

The historical roots of knowledge security illustrate its enduring significance. After World War I, optimism for international cooperation encouraged the global exchange of students and scholars, exemplified by the establishment of the Institute of International Education (IIE, 1919, United States), the Deutscher Akademischer Austauschdienst (DAAD, 1925, Germany), and the British Council (1934, United Kingdom). Following World War II, national security considerations increasingly shaped higher education policy, particularly in the Global North, resulting in the expansion of language and area studies programs, North-South cooperation initiatives, and a shift in global dominance toward the United States (de Wit & Merx, 2022). By the late 1980s, with the end of the Cold War and the increasing role of knowledge in globalized economies, attention shifted from protection toward cooperative knowledge diplomacy.

Yet in the current geopolitical environment, the ideal of win-win knowledge diplomacy is increasingly challenged by renewed emphasis on knowledge security. As DeLaquil and de Wit (2025) highlight, higher education is both shaped by—and a participant in—geopolitical tensions. A central tension emerges: while universities pursue openness and collaboration, states impose new forms of control, reshaping academic work as a matter of national interest and creating what Sá and Sabzalieva (2018) describe as competing

logics of globalism and nationalism.

These concerns remain acute at national and regional levels, with states adopting protective measures to prevent strategic knowledge, technology, and sensitive data from being accessed by adversaries. Such measures encompass both technological security, restricting dual-use technologies, and information/data security, including safeguarding genetic datasets and sensitive research outputs. As DeLaquil & de Wit (2025) argue, these measures are not purely top-down. Through a process of *responsibilization*, universities and academics are tasked with monitoring their own collaborations according to state-defined security risks, thereby altering the traditional relationship between the university and the state and challenging core values such as institutional autonomy and academic freedom (DeLaquil & de Wit, 2025; de Wit & Glass, 2024).

Recent geopolitical tensions have only intensified this dynamic. Shih (2024) emphasizes that responsible internationalization now "focuses on the discretionary responsibilities that researchers have when building international relationships" (p. 848). In effect, higher education is governed by the principle of *being as open as possible, as closed as necessary*, reflecting a shift from earlier internationalization ideals toward a more cautious and controlled model shaped by geopolitical imperatives.

Recent Policies: The Multi-Level and Multi-polar Geopolitical Dynamics

Table 2 illustrates how macro-level geopolitical dynamics materialize in higher education through national and regional policies, reshaping traditional knowledge diplomacy channels (Wilton Park, 2024). These measures, including visa and immigration regulations, export controls, and research security frameworks, constitute an emergent geopolitically aware regime in which universities and academics are increasingly *responsibilized* to enact state priorities (Marginson, 2025; DeLaquil & de Wit, 2025).

Table 2. Recent Policies Affecting Knowledge Diplomacy and Research Security in Higher Education

Country/Region	Policy/Measure	Effective/ Recent Update Time	Higher Education Impact Area
United States	*CHIPS and Science Act*	2022	Technology R&D, Industry Subsidies, Research Security
	Research Security & Foreign Funding Transparency	2025	Research Security, Funding Transparency, International Cooperation Compliance
China	*Export Control Law*	2020	Technology Export, Dual-Use Items
	Data Security Law and Personal Information Protection Law	2021	Cross-Border Data Transmission, Personal Data Protection, Research Data Sharing
European Union	*Research Security Monitor 2025*	2025/2026	Research Security Policy
	Horizon Europe Research Security Measures	2021-2027	Research Security, International Cooperation Review
United Kingdom	*Graduate Route Visa Policy*	2025	Academic Mobility, Talent Retention
	Academic Technology Approval Scheme	Long-Term Policy	Academic Mobility, Research Security
Australia	*Guidelines to Counter Foreign Interference in Australian Universities*	2025	Research Security, Cyber Security, Institutional Governance
Canada	*National Security Guidelines for Research Partnerships*	2025	Research Security, Research Partnerships
Japan	*Foreign Exchange and Foreign Trade Act*	2025	Knowledge and Technology Transfer Control

The resulting policy landscape spans diverse jurisdictions and instruments. For example, US BIS export controls and the CHIPS and Science Act illustrate how national security priorities shape collaborations in sensitive fields (Luo & Van Assche, 2023), particularly as global dependence on advanced semiconductors, especially US-designed AI GPUs, creates strategic vulnerabilities while driving advances in security, science, and economic growth. Research security offices exemplify this transformation, translating national mandates into daily academic practice. For instance, US institutions are now required to submit post-award disclosures for financial support received from foreign sources associated with countries of concern, to avoid “risk of foreign interference in institutions of higher education” (NSF, 2025). Similarly, China’s Data Security and Export Control laws operationalize knowledge protection, with

implications to generate conflict with external relations (Chen & Sun, 2021; Liu, 2021).

The influence extends beyond headline US–China rivalries to encompass a broader constellation of actors (Bŕogger et al., 2025). Regional organizations, middle powers, and multilateral coalitions actively shape international collaboration, mobility, and knowledge governance, creating a multipolar geopolitical landscape (Aydin, 2021; Cooper & Parlar Dal, 2016). The EU frameworks, such as Horizon Europe, influence cross-border partnerships and investment oversight (Beaucillon, 2023). The EU's adoption of "Open Strategic Autonomy" exemplifies this complexity, seeking to preserve the benefits of international collaboration while safeguarding sensitive knowledge domains through risk mitigation measures embedded in Horizon Europe consortia requirements (European Commission, 2025). ASEAN states pursue yet another trajectory, emphasizing regional higher education connectivity and mobility harmonization as instruments of collective resilience amid intensifying great-power competition (UNESCO, 2024).

Additional measures, including the UK's Graduate Route Visa and Australia's Foreign Interference Guidelines, further underscore the intersection of institutional responsibility and national talent strategy (Gutema et al., 2023). Japan integrates science and technology policy into alliance commitments with the United States while selectively engaging with Chinese institutions in mobility, exchanges, and soft areas such as climate change and public health (Baker McKenzie, 2024; Kato & Ota, 2024; Ota, 2018). Collectively, Table 2 provides a heuristic for tracing the cascading impact of geopolitical forces across scales, complementing the multi-level pathways depicted in Table 1.

Future Research Agenda

This article has examined the intersection of geopolitics and international higher education, focusing on how major global actors shape academic mobility, research collaboration, and knowledge flows. We addressed two questions: (1) What are the origins of geopolitics, and how is it interpreted in higher education research? (2) How are recent geopolitical policies reshaping the field? Here, we raise a third question: given rapidly shifting geopolitical realities, what considerations should guide research design and interpretation in higher education?

International higher education is both shaped by and an actor within geopolitical developments, especially during times of turmoil in the past few years (Wang et al., 2025). Future research should explore this two-way interaction: how geopolitical tensions affect teaching, research, and public service; how institutions balance international collaboration and knowledge diplomacy with security concerns; and what mechanisms universities develop to navigate competition and cooperation amid geopolitical turbulence. Contemporary trends highlight tensions between the need for internationalization to address global challenges, such as the Sustainable Development Goals (SDGs), and pressures toward retrenchment, including anti-immigration measures, critiques of international students, restrictions on research collaboration, and skepticism toward global citizenship. Understanding and analyzing these tensions is critical.

We also provide several avenues that warrant future higher education research attention. First, conceptual clarification: scholars should distinguish geopolitics from related concepts. Some examples include the following: (anti) globalization, (undoing) internationalization, nationalism, and populism. Comparative conceptual work across international relations, political geography, and higher education studies can sharpen analytic precision and illuminate how these terms, concepts, and power and space uniquely interact in higher education.

Second, the comparative region- and country-level policy analysis: research should examine how states institutionalize knowledge diplomacy and security. For example, the US emphasizes "decoupling," the EU pursues "de-risking," and China asserts "technological sovereignty." Cross-national comparisons reveal how political economies generate distinct policy logics that reshape higher education.

Third, institutional adaptation: universities are active agents responding to policy through compliance offices, revised partnership criteria, or resource allocation. Case studies can illuminate how organizational cultures mediate tensions between openness and state oversight.

Fourth, scholarly agency and experiences at the micro level: scholars navigate conflicting expectations around collaboration, autonomy, and responsibility. Studies can uncover how academics manage and balance the ethical decisions of self-censorship, partnership, and mobility destinations, foregrounding the lived experience of geopolitics.

Fifth, equity and the global south: geopolitical realignments disproportionately affect non-Western nations, institutions, and individuals, intensifying inequalities in funding, research, mobility, and influence. Investigating how these actors negotiate agency under multipolar conditions is essential for a more inclusive understanding of global higher education.

Finally, all research should be grounded in the core values of higher education: autonomy, academic freedom, participatory governance, academic integrity, and societal responsibility. Addressing these challenges is urgent: understanding and analyzing the interaction between geopolitics and higher education would contribute to sustaining inclusive, responsible, and globally engaged scholarship in an era of mounting geopolitical complexity.

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A Mixed-Methods Study of the Impact of Self-Efficacy on Self-Regulated Learning Strategies among Vietnamese Undergraduates Enrolled in a Research Methods Course

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Abstract. The study examined how self-efficacy (SE) influenced the use of self-regulation learning (SRL) strategies among undergraduates in a research methods course and whether students with varying SE levels differed in SRL usage. Using a sequential mixed-methods design, data were collected from 352 Vietnamese undergraduates via a questionnaire and 20 students through journal entries. Convenience sampling was used for the survey, and purposive sampling for journal participants. A rank-based multiple regression analysis showed SE as a strong predictor of SRL, with higher SE linked to better SRL. Gender, field of study, year of study, and research experience did not significantly predict SRL. The Kruskal-Wallis test revealed significant differences in SRL strategy use (self-control, decision-making, goal orientation) across SE groups (low, average, high), with large effect sizes. SRL improved progressively from low-SE to high-SE groups. Qualitative findings highlighted that high-SE students were more self-regulated in goal setting, goal planning, coping strategies, and their evaluating and adapting skills. Conversely, low-SE students demonstrated limited SRL use or struggled to apply these strategies. The study emphasizes the need for educational interventions to enhance SE and SRL, particularly in local and similar educational contexts.

Keywords: mixed-methods design, self-efficacy, self-regulation, undergraduates, Vietnam

Introduction

In Vietnam, undergraduate students are required to complete a research methods (RM) course before conducting their own research projects. While some scholars (e.g., Tran et al., 2019) highlight students' positive attitudes toward research, others (e.g., Vo & Truong, 2022) report challenges with research methods, scientific writing, and motivation. No clear explanation or reasons for the differing

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experiences has been provided, possibly due to the lack of studies investigating students' research experiences in Vietnam. In other contexts, scholars have identified common research difficulties with undergraduates, including challenges in locating relevant literature and contextualizing findings (Saeed & Ghazali, 2018), justifying research paradigms and protocols (Saeed et al., 2020), and developing skills in reading for research purposes (Yeh, 2009). Academic writing poses additional challenges, particularly crafting coherent paragraphs (Zhang & Zhang, 2024). Students also struggle with statistical analysis and applying techniques (Ipanaqué-Zapata et al., 2023), often due to insufficient research experience (Yeh, 2009) and weak academic writing skills (Zhang & Zhang, 2024). As a result, these challenges lead to anxiety and negative attitudes toward research and RM courses (Earley, 2013), as well as course dropouts in some cases (Angaiz et al., 2021).

Social Cognitive Theory (SCT), developed by Bandura (1997), emphasizes the role of human agency in shaping environments and how these environments influence behavior. People's ability to modify the environments to reach their goals stems from two key mechanisms of agency: self-efficacy (SE) and self-regulated learning (SRL). SE, defined as the belief in one's ability to accomplish specific tasks (Bandura, 1997), can influence students' drive, persistence, motivation, and management of challenges. SE grows through prior achievements, observation of others doing similar tasks, encouragement, and control of emotions. Extensive research on SE in university settings has been conducted over the years, highlighting its positive influences in helping students navigate challenges and anxieties and improve their academic achievements. For example, scholars (e.g. Hill et al., 2022; Medaille et al., 2022) agree that SE is one of the most important predictors of students' academic performance, motivation, and persistence. Unlike students with low levels of SE, those with higher SE levels face challenges with greater confidence, are better at controlling anxiety and stress, and invest more effort in finding solutions. Although SE has undergone comprehensive investigation in academic settings, a search on Google Scholar, ProQuest, and ERIC databases shows that the manipulation of SE within the specific context of RM courses, especially undergraduate RM courses, has been entirely lacking. Due to the specific nature of SE (Mensah et al., 2023; Schunk, & Pajares, 2010), its importance to students' learning (Hill et al., 2022), and the challenges students face in learning RM courses (Ipanaqué-Zapata et al., 2023; Saeed et al., 2020), there is an urgent need to conduct research to understand SE in RM courses.

Self-regulated learning (SRL) refers to the process of managing ideas, feelings, and behaviors to take charge of learning and achieve specific goals (Zimmerman, 2002). It can assist undergraduate students in overcoming anxiety and negative attitudes related to research and research methods, ultimately enhancing their research achievement. SRL consists of three phases: forethought (goal setting and planning), performance (strategy application and monitoring), and self-reflection (evaluation and adjustment). Zimmerman (2002) highlighted the role of metacognitive techniques, such as resource allocation, activating and evaluating prior knowledge, seeking help, and assessing comprehension, in empowering learners to actively monitor, make informed decisions, and take charge

of their learning process. Empirical studies confirm SRL as an essential construct for successful academic learning (Foong et al., 2021; Lee et al., 2021). Students who apply appropriate SRL strategies tend to be more successful in their academic performance (Agustiani et al., 2016) and more independent in their learning (Liu et al., 2024). Despite numerous studies exploring SRL in academic settings, what is missing from the literature is research on SRL in RM courses. This gap undermines current approaches to facilitating the success of undergraduate students in learning essential research knowledge and skills in the context of RM courses.

Early researchers such as Bandura (1997) and Zimmerman (2002) assert that SE and SRL are intertwined and form a dynamic system. SE acts as a foundation of SRL while SRL is a reinforcer of SE. Students with greater SE are more likely to apply metacognitive strategies effectively. The belief that they can successfully accomplish tasks encourages students to take proactive steps such as setting goals, applying and reviewing learning strategies, and adapting methods to achieve their desired outcomes. The experience of success resulting from these strategies reinforces SE, fostering confidence and motivation for tackling more complex tasks. Conversely, students with lower SE are prone to doubt and underperformance. They often set modest goals, struggle to adapt strategies, and may doubt their personal competence or the effectiveness of the learning strategies. This can result in poor outcomes, further diminishing their SE and reinforcing the belief that they are incompetent. In the context of RM courses, when students develop both SE and SRL, they are more likely to feel competent doing challenging research tasks and coming up with solutions. Fostering SE and SRL is essential for navigating the complexities and uncertainties of research with confidence, persistence, and motivation.

The links between SE and SRL strategy use have been explored extensively across various contexts and academic disciplines; however, the findings remain inconclusive. Many scholars (e.g., Agustiani et al., 2016; Foong et al., 2021; Lee et al., 2021; Utami, 2023) agree that SE significantly impacts students' abilities to complete academic tasks through the application of SRL strategies. High SE enhanced the application of metacognitive strategies, enabling learners to set learning goals, select effective methods, adapt their strategies, and persist in the learning process. Students with higher SE tended to be more self-regulated learners compared to those with lower SE. They demonstrated greater proficiency in using SRL strategies. However, other researchers, such as Apridayani and Teo (2021) and Toharudin et al. (2019), identified an inverse correlation between SE and self-regulation with students' SRL strategies growing as their SE decreased. It appeared that students with lower SE levels were more conscious of the value of learning compared to their peers, triggering a sense of urgency to actively employ SRL strategies as a compensatory mechanism. The variation in findings across studies highlights that the relationship between SE and SRL is both context- and task-dependent, underscoring the dynamic interplay between these constructs in diverse academic and cultural settings (Bandura, 1997).

In Vietnam, studies investigating the links between SE and SRL of undergraduates are still in their early stages. None of these studies have explored the SE-SRL relationship in the context of RM courses. Recently, a few studies have examined the relationship between SRL and SE in English language learning (ELL) or between SRL and academic performance in online learning. For instance, Tran et al. (2023) investigated high school students' SE and SRL in ELL and found a positive relationship between SE and SRL. The students exhibited high self-efficacy and frequently employed SRL strategies to enhance their language skills. Their strong SE stemmed from ample opportunities to practice the language. Moreover, the students' high SE in ELL, coupled with their perception of the language's importance, motivated them to utilize SRL strategies to achieve better learning outcomes. Nguyen (2021) investigated the correlation between online SRL and SE in ELL among university students during the COVID-19 pandemic and found a significant relationship only between the time management subscale of SRL and SE. The lack of a stronger relationship between the entire scale of SRL and SE was attributed to the limited preparedness of both teachers and students for online learning, stemming from the abrupt onset of the pandemic. Dinh et al. (2022) examined the impact of SE and SRL on university students' satisfaction and academic performance in online learning, confirming a positive impact among the variables. These results confirm the intertwined link between the two constructs and the context-specific and task-dependent nature of SE and SRL.

The above review of relevant studies shows that while numerous studies have explored SE and SRL strategy use in broader educational contexts, such as general academic performance and online learning, research on these constructs within the specific context of RM courses is entirely lacking. It is crucial to examine whether findings of the SE-SRL link from general education research might be transferable (or not) to RM courses. Additionally, previous studies mainly examined the relationship between SE and SRL using correlation analysis, providing valuable insights into their associations. Many studies failed to account for potential confounders, such as gender, year of study, field of study, and research experience, which are context-sensitive and may influence the relationship. Furthermore, although many studies have examined the association between SE and SRL, few have employed qualitative or mixed-methods designs. Many of the previous studies relied on quantitative approaches (Gambo & Shakir, 2021), focusing on measuring SE or SRL and identifying correlations between variables, often neglecting the underlying mechanisms driving these relationships. Consequently, it remains unclear how students with varying levels of SE plan, monitor, and apply SRL strategies.

The present study explores the impact of SE on SRL strategy use among Vietnamese undergraduates enrolled in a RM course. It addresses the lack of research on the SE-SRL relationship, which is particularly important in RM education, as the courses require students to engage in complex and often unfamiliar tasks such as designing research, analyzing data, and writing scientifically. These tasks demand cognitive skills like critical thinking and problem-solving (van Blankenstein et al., 2019) and high levels of learner autonomy and persistence (Quan & Elby, 2016). Students must regulate their learning, manage setbacks, and revise their work in response to feedback, which are core aspects of

SRL (Zimmerman, 2002). However, students are unlikely to engage effectively in SRL without a strong sense of SE, especially in the face of these challenges. Therefore, an understanding of the SE-SRL link in RM courses is essential, as it can inform more effective instructional design and targeted support strategies that enhance student success in both RM courses and future research endeavors.

In this study, Social Cognitive Theory (SCT) and Zimmerman's (2002) SRL model provided a theoretical framework for selecting research methods and interpreting how students managed challenges in the RM course in relation to their SE. A mixed methods design was employed in the present study to examine the nuanced interplay between SE and SRL: quantitative data revealed correlations between constructs, while qualitative data uncovered the context-specific dimensions of students' learning experiences (Foong et al., 2021). The SE and SRL scales were selected because they align with the social cognitive perspective and capture key metacognitive strategies outlined in Zimmerman's model. Journal entries, in particular, fostered metacognitive reflection. This is a core aspect of SRL and provided insights into students' goals, beliefs, and learning styles, which are central to SCT. This use of qualitative data to illuminate SRL processes is a key contribution of the study, addressing gaps in existing SE-SRL research within RM contexts. Furthermore, the theoretical relationship between SE and SRL offered a lens for explaining how and why students with varying levels of SE engaged in different SRL strategies. The findings provide context-specific insights and lay a foundation for interventions to enhance SE, integrate SRL-focused activities into curricula, and improve research performance. The study addressed the following research questions:

1. What is the impact of self-efficacy on self-regulation learning strategies after controlling for gender, area of study, year of study, and research experience?
2. Do self-regulation learning strategies differ among students with varying levels of self-efficacy?

Method

A sequential mixed-methods design was used in this study. The design combines both statistical data and in-depth insights (Creswell & Creswell, 2017). Quantitative data collected from an online survey helped to examine whether SE predicted SRL strategy use while controlling for other variables and to explore if SRL strategy use differed among groups with different SE levels. Qualitative data from journal entries further illustrated how students from these SE groups differed in the way they planned, monitored, and adjusted their SRL strategies.

Participants

The study employed convenience sampling to select 352 undergraduate survey participants from a population of 2,250 students at a Vietnamese public university. The sample size was determined using

Raosoft software, with a 5% margin of error, a 95% confidence level, and a 50% response distribution. The sample included 140 females and 212 males, with 55.7% seniors (n=196) and 44.3% juniors (n=156). Additionally, 58.5% (n=206) had prior research experience, while 41.5% (n=146) did not. Participants majored in Social Sciences (11.1%), Technology and Engineering (73.3%), and Business and Management (15.6%). Since the local university where the research was conducted specializes in applied sciences, particularly in Technology and Engineering, it has a higher enrollment of students in these male-dominated disciplines. This institutional focus is reflected in the sample, which included a majority of male students and students from Technology and Engineering backgrounds. Additionally, the university requires all students to take a compulsory RM course in their third year or during the seventh semester of study. Given these institutional characteristics, the sample, though not randomly selected, appears broadly representative of the target cohort in terms of gender, academic year, and disciplinary distributions.

Purposive sampling was used to select journal writing participants with varying levels of SE in order to explore differences in SRL strategies. The sample comprised 20 students (8 males and 12 females). Majors included Social Sciences (25%, n=5), Technology and Engineering (45%, n=9), and Business and Management (30%, n=6). Seventy percent of students (n=14) had prior research experience, while 30% (n=6) did not. The group consisted of 60% seniors (n=12) and 40% juniors (n=8).

Table 1: Demographic Characteristics of Participants

Survey participants (n=352)			
Category		n	%
Gender			
	Male	140	39.8%
	Female	212	60.2%
Year level			
	Junior	196	55.7%
	Senior	156	44.3%
Research experience			
	With experience	206	58.5%
	Without experience	146	41.5%
Major			
	Social Sciences	39	11.1%
	Technology & Engineering	258	73.3%
	Business & Management	55	15.6%
Journal writing participants (n=20)			
Category			
Gender			
	Male	8	40%
	Female	12	60%
Year level			
	Junior	8	40%
	Senior	12	60%
Research experience			
	With experience	14	70%
	Without experience	6	30%
Major			
	Social Sciences	5	25%
	Technology & Engineering	9	45%
	Business & Management	6	30%

Instruments

The Questionnaire

The Self-Efficacy Scale. This study employed a self-efficacy scale developed by Phan (2024), which achieved a Cronbach's alpha of 0.966. This scale was chosen for the present study because it covered key components relevant to research-related activities in a RM course and was used to measure the self-efficacy of Vietnamese undergraduates enrolled in a research-writing sSkills course. The scale was informed by a review of relevant literature (Bandura, 2007; Hill et al., 2022; Robnett et al., 2015; Seng et al., 2020) and consultations with experienced teachers and scholars. It initially comprised 27 items rated on a five-point Likert scale and covered four dimensions: research planning (8 items), data

collection and analysis (6 items), research communication (7 items), and scientific writing (6 items). Content validity was evaluated by three experts to ensure clarity and relevance. An exploratory factor analysis (EFA) was then conducted to refine the factor structure. Three items were removed due to cross-loadings or failure to load significantly on any factor. The EFA results revealed that items from the original data collection and analysis and research communication dimensions loaded onto a single factor, which was subsequently labeled research skills and communication (RSC). The final 24-item scale comprised three factors: research planning (RP; 6 items, $\alpha = 0.885$), research skills and communication (RSC; 12 items, $\alpha = 0.878$), and scientific writing (SW; 6 items, $\alpha = 0.948$). Cronbach's alpha for the scale in the present study was 0.851. The Cronbach's alphas for the subscales were 0.704 for RP, 0.816 for RSC, and 0.715 for SW. Higher scores on the scale indicate greater self-efficacy levels. Sample question items include: "I can formulate research questions," "I can perform data cleaning," and "I can present my research proposal briefly."

The Self-Regulation Learning Scale

The self-regulation learning scale by Vaculíková et al. (2022) was used in this study. This scale was selected because it was developed within a social cognitive perspective and covered key metacognitive strategies. It consists of 22 items on a five-point Likert scale, divided into three factors: self-control (SC) (11 items, e.g., I have a hard time setting goals for myself); decision-making (DM) (7 items, e.g., There is usually more than one way to accomplish something); goal orientation (GO) (4 items; e.g., I can stick to a plan that's working well). Negative items in the SD factor were re-coded. Cronbach's alpha for the whole scale in the study of Vaculíková et al. (2022) was 0.873. The reliability for SC, DM, and GO sub-scales was 0.863, 0.769, and 0.763, respectively. Cronbach's alpha for the whole scale in the present study was 0.868. The Cronbach's alphas for the subscales were 0.872 for SC, 0.855 for DM, and 0.768 for GO.

Journal Entries

In this study, weekly journal entries documented students' experiences, providing detailed accounts of the processes and types of SRL strategies they formulated, implemented, reviewed, and adjusted while performing specific research tasks. These entries captured specific instances in which students reviewed and adjusted their strategies to align with perceived task requirements, when applicable. The study followed Zimmerman's (2002) model of SRL and Bandura's (2007) SCT to develop guidelines in the form of prompts. While some researchers (e.g., Walsh, 2009) have raised concerns that using specific prompts in journal entries may limit the richness and emergence of unexpected insights in qualitative data, others, such as Molee et al. (2011) and Waggoner-Denton (2018), have noted challenges associated with unstructured prompts. For example, some students may find the writing

process burdensome due to limited experience with reflective practices. Cengiz (2020) and Verpoorten et al. (2012) argued that structured prompts in reflective journals can enhance reflection and learning by helping students remain mentally engaged and more self-aware. Therefore, in the present study, to support participants' motivation to write and to encourage systematic and rigorous reflection, guidelines in the form of specific prompts were provided. Examples of journal prompts included the following questions: "What are your learning goals for this week? Why are these goals important to you? How confident do you feel about achieving them?"; "To what extent did you achieve your goals last week? What helped you succeed or prevented you from reaching them?"; "How did you respond to the challenges you faced? Did you use any strategies? Did you seek support to overcome them?".

Data Collection and Analysis

The data collection lasted approximately three months. The questionnaire was translated into Vietnamese to ensure participants' accurate understanding and validity of responses. Back-translation was used to verify the accuracy of the translation. A total of 450 undergraduates enrolled in 10 RM classes were invited to complete an online questionnaire, with assurances of voluntary participation and anonymity, which took approximately 15 minutes. After two weeks, 352 students sent their responses, resulting in a response rate of 78%. Based on their SE scores, students were categorized into three groups: high, average, and low SE.

Due to practical constraints, invitations were sent to 30 students to join the qualitative data collection phase. Ten students from each of the three groups were selected and invited to submit journal entries via email over a three-month period. This sampling strategy aimed to ensure a balanced representation across the SE spectrum and to gain deeper insights into how SE levels may influence SRL behaviors. Twenty students (8 from Group 1, 6 from Group 2, and 6 from Group 3) agreed and completed this task. The students began writing their journal entries one week after the questionnaire was distributed, and the final entries were collected one week before they submitted their research proposals for the course. Pseudonyms were used to protect the participants' identities.

The collected quantitative data were analyzed using the SPSS program. Descriptive statistics were used to calculate the mean scores of SE levels to categorize the students into groups. A rank-based multiple regression analysis was conducted to determine whether SE predicted SRL. A Kruskal-Wallis test was performed to examine differences among groups with varying levels of SE across all SRL dimensions. The interpretation of effect sizes followed the guidelines of Cohen (1988) and Kirk (2013). Qualitative data were analyzed to understand the differences in the use of SRL strategies among the SE groups, following the procedures of the thematic coding method (Braun & Clarke, 2006). Data analysis was conducted at both the individual and group levels. Individual student data within each SE group were examined first, followed by a comparison of codes, themes, and categories

across the three SE groups. The coding process identified four main themes: study goals, planning, coping strategies, and evaluation and adaptation strategies.

In this study, the researcher's experiences as a university lecturer and her Vietnamese background may have influenced the research process. However, by maintaining a critical awareness of how personal perspectives can shape data collection, analysis, and interpretation, measures were taken to ensure that the study's conclusions were grounded in the data rather than the researcher's own views. The research process was transparently described. Qualitative analysis followed thematic analysis. To further enhance validity, participants were given the opportunity to review and validate the researcher's interpretations of journal entries. This improved how the concepts or meanings of the participants were interpreted and represented in the present study. An example of initial coding of students' data within each SE group is as follows.

Table 2. Example of initial coding of students' data

Theme		Extract	SRL	SE
Study goals Group 3 Journal entry 1.	1.	I will feel guilty if I don't pass this course with a high score. I can get a good job if I get a good degree. My parents work very hard to pay my tuition fees. I think I can make my parents happy with my score (GR3ST1RJ1).	external, long-term	high
	2.	My goal this week was to search for and refine my proposal topic. I quite like doing research, so I think this course is interesting and useful. It can help me with my graduation thesis or when I pursue my master's degree. I like the course, so I will try to do the best I can (GR3ST2RJ1).	external, short-term	high
	3.	I am working with my research team members to find the best way to identify research gaps for our study. My task is to develop a list of relevant reading materials by identifying reliable researchers and collecting their work. This task is time-consuming, but I believe it will help me develop important skills in conducting literature reviews and evaluating academic sources. By learning how to recognize influential researchers and analyze their contributions, I can strengthen my ability to assess existing knowledge and identify gaps in the field. I feel motivated to improve my research skills and contribute effectively to my team's study (GR3ST3RJ1).	internal, short-term, long-term	high
	4.	My goal this week is to learn how to formulate research questions. This is important because research questions determine the direction of the next steps in my study. Learning to formulate clear and researchable questions is quite challenging. However, I feel confident in achieving this goal since I have prior experience reading research papers. I believe that by carefully analyzing research articles and asking questions when needed, I can make good progress (GR3ST4RJ1).	short-term, internal	high
	5.	I want to learn the best way to read and summarize academic journal articles. Knowing how to extract key information from articles is crucial because, as a novice researcher, I need to read extensively. I have carefully noted my lecturer's advice and discussed summary-writing strategies with my research team. With these preparations, I believe I can complete this task successfully (GR3ST5RJ1).	internal, short-term	high
	6.	This week, I would like to learn how to use research tools and databases such as Google Scholar and library databases. Finding relevant academic journal articles or research materials quickly is essential, as ineffective searching can lead to wasted time on unreliable or irrelevant sources. I have scheduled an appointment with a librarian for guidance. With her help, I am confident that I can complete this task without difficulties (GR3ST5RJ1).	internal, short-term	high

Results

The impact of self-efficacy on self-regulation learning strategies after controlling for gender, year of study, field of study, and research experience

Normality tests for all dimensions of SE and SRL were conducted. The results of Kolmogorov-Smirnov and Shapiro-Wilk tests indicated that the distribution of the data for all dimensions was not normal (p-values = 0.000 < 0.05). A rank-based multiple regression was conducted to determine whether SE predicted SRL while controlling for field of study, year of study, research experience, and gender. As can be seen in Table 1, the model was statistically significant ($F(5, 346) = 62.98$, $p < 0.001$), The model explained 47.6% of the variance in SRL scores ($R^2 = 0.476$), with a large effect size, $f^2 = 0.91$, indicating a strong relationship between the predictors and SRL. The Durbin-Watson statistic was 1.671, suggesting no evidence of autocorrelation in the residuals. SE is a strong and significant predictor of SRL scores (B = 0.684, Beta = 0.684, t = 17.404, p < .001). A higher self-efficacy score is associated with better SRL. Gender, area of study, year of study, and research experience did not significantly predict SRL, as all p-values exceeded 0.05.

Table 3. Rank-Based Multiple Regression Analysis Predicting Self-Regulation Learning

Predictor	B	Std. Error	β	t	*p*	VIF
(Constant)	58.840	20.492		2.871	.004	
Rank of Self-Efficacy	.684	.039	.684	17.404	.000	1.019
Rank of Gender	-.024	.047	-.020	-.506	.613	1.031
Rank of Research experience	.047	.046	.040	1.024	.306	1.009
Rank of Study Area	.007	.046	.006	.150	.881	1.021
Rank of Year of Study	-.048	.056	-.033	-.853	.394	1.011

Note: Dependent Variable: Self-Regulation Learning (SRL). $R^2 = .476$, Adjusted $R^2 = .470$, Cohen's $f^2=0.91$, $F(5, 346) = 62.98$, $p < .001$. Durbin-Watson = 1.671

The Use of Self-Regulation Learning Strategies among Students with Varying Levels of Self-Efficacy

Quantitative Data

Based on their SE scores, students were divided into three groups: high, average, and low self-efficacious. First, the mean score of all students was calculated. Next, cut-off points were determined. Low self-efficacious students (Group 1) scored less than M – SD (Mean Score - Standard Deviation). Average self-efficacious students (Group 2) scored within M - SD and M + SD. High self-efficacious

students (Group 3) scored greater than M + SD. There were 64 students in Group 1, 212 in Group 2, and 76 in Group 3.

Table 4. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
MEAN self-efficacy	352	2.00	3.08	2.59	.30
Valid N (listwise)	352				

Table 5. Self-Efficacy Categories

Group	Category	Score	Frequency	Percent
1	Low	< 2.29	64	18.2
2	Average	2.29 – 2.89	212	60.2
3	High	>2.89	76	21.6
Total			352	100.0

The Kruskal-Wallis test was used to analyze whether the use of SRL strategies (with three constructs: self-control, decision-making, goal orientation) differed among students with varying levels of SE (low, average, high). The results indicated significant differences among groups with varying levels of self-efficacy across all dimensions. Regarding the self-control construct, Group 1 had the lowest mean rank (58.58), while Group 3 had the highest mean rank (250.54), and Group 2 was intermediate (185.56). The test statistic ($H = 128.32$, $df = 2$) was significant ($p < .001$), with an effect size of $\eta^2 = 0.362$, indicating a large effect. Similarly, in the decision-making construct, Group 1 scored the lowest (59.39), Group 3 scored the highest (255.43), and Group 2 had a moderate rank (183.56). The test statistic ($H = 132.44$, $df = 2$) was significant ($p < .001$), with an effect size of $\eta^2 = 0.374$, suggesting a large effect. In the same vein, in the goal orientation construct, Group 1 had the lowest rank (67.57), Group 3 had the highest (248.26), and Group 2 was in between (183.66). The test statistic ($H = 113.49$, $df = 2$) was significant ($p < .001$), with an effect size of $\eta^2 = 0.319$, showing a large effect. Overall, the use of SRL strategies improved from Group 1 to Group 3, with large effect sizes across all dimensions.

Table 6. Kruskal-Wallis Test Results

Construct	Group	*N*	Mean Rank	*H*	*df*	*p*	*η2*
SC	1	64	58.58	128.32	2	.000	0.362
	2	212	185.56				
	3	76	250.54				
DM	1	64	59.39	132.44	2	.000	0.374
	2	212	183.56				
	3	76	255.43				
GO	1	64	67.57	113.49	2	.000	0.319
	2	212	183.66				
	3	76	248.26				

Note. SC = Self-Control; DM = Decision-Making; GO = Goal Orientation; Group 1= low; Group 2=average; Group 3=high. Eta-squared (η^2) values indicate the effect size for each construct.

Qualitative Data

Students from each of the three groups developed different types of study goals, implemented differing goal planning, displayed distinct coping strategies, and evaluated and adapted their strategies differently. The use of SRL strategies increased progressively from students with lower SE levels to those with higher SE levels, highlighting a strong link between students' beliefs in their capabilities and their ability to self-regulate their learning in the RM course.

Study goals. Students from the three groups displayed different types of study goals, closely reflecting their levels of SE and distinct patterns of SRL. Students in Group 1, who exhibited low levels of self-efficacy**,** showed little interest in the course. Most of their goals were set without personal motivation or clear reasons, or their goals were primarily focused on meeting minimum requirements (e.g., completing required tasks) with minimal effort. The goals did not indicate long-term personal development but rather short-term academic obligations. This pattern reflects a limited belief in their ability to succeed in the RM course, resulting in minimal goal investment and low engagement.

> My goal for next week is to finish the due homework. I often struggle to understand the materials, but it doesn't bother me if I complete the homework (GR1ST2RJ9).
>
> I don't have clear goals for next week. I think I'll just complete what the teacher requires. This course doesn't interest me, but it is a required one (GR1ST8RJ8).
>
> My goal this week was to complete a list of a few potential ethical issues, but it turned out to be time-consuming. I needed to search for information, so I didn't complete it. Why is the course so difficult and brain-damaging? (GR1ST6RJ10).

Group 2 students, characterized by average levels of self-efficacy**,** prioritized short-term goals, like achieving high scores to pass the course, and frequently compared their performance to peers. Their motivation tended to be more externally driven. The moderate level of SE allowed them to set clearer goals, but primarily for immediate success rather than sustained personal achievement.

> The assigned task for next week is to draft the methodology section of my research proposal, so my goal this week is to read and learn from previous research. Last week, my friend got compliments from the teacher for his data analysis. Not sure if I can do like him (GR2ST5RJ8).

> I am worried that I will fail the course. Last week I did very poorly. I could not perform a basic analysis on the teacher's provided dataset (GR2ST4RJ8).

Group 3 students set more ambitious and effective goals compared to the other two groups, driven by confidence in their ability to succeed. These self-efficacious individuals established both long-term and short-term goals, driven by internal and external motivations such as achieving high course scores, making their parents proud, enjoying research, improving their research skills, or pursuing further studies. Their long-term goals were supported by the accumulation of short-term successes. It appears that their goals focused more on personal academic development than external pressures such as deadlines.

> I am working with a team to present at my faculty's scientific workshop next month, which is why I need to accomplish this data analysis task. I believe I can finish the task soon because I did the same task in class (GR3ST6RJ4).

> My goal this week was to search for and refine my proposal topic. I quite like doing research, so I think this course is interesting and useful. It can help me with my graduation thesis or when I pursue my master's degree. I like the course, so I will try to do the best I can (GR3ST5RJ3).

Goal planning. The data revealed differences in goal planning among students, with Group 1 displaying vague or minimum-focused goals, leading to a lack of direction and purpose in their planning. This reflected their limited belief in their ability to plan study goals.

> I don't often read the textbook or notes beforehand simply because I don't understand them, and the teacher will explain everything in the classroom (GR1ST2RJ9).

> I only do what the teacher requires of me. The class has no assignments this week, so I didn't plan anything. I'm not sure if I can do the tasks well (GR1ST3RJ5).

Students in Group 2 typically created simple plans, such as repeatedly reading notes or textbooks or underlining texts. Some plans, like organizing study spaces, were impractical and unrelated to their

study goals. For some students, planning provided a sense of security in the classroom. While these strategies indicated some engagement, they were often applied without strategic alignment to learning goals. The strategies showed their average self-efficacy and moderate planning behaviors**.**

> I plan to understand the basics of data analysis. I'll need to read the assigned textbook chapters repeatedly, likely several times, until I understand the material (GR2ST1RJ4).
>
> Next week, I want to focus on organizing my study space. I think if my desk is tidy, I can concentrate better on my assignments but I'm unsure if I'll perform well (GR2ST6RJ11).
>
> I'm not good at math, but the teacher will send us a dataset for analysis. I will spend two to three hours next week on the dataset to ensure I understand the material, but I feel nervous (GR2ST5RJ5).

Group 3 students developed logical, detailed, goal-oriented plans broken into smaller steps, aligned with weekly goals to monitor progress effectively. Their confidence in their ability to influence academic outcomes was reflected in their proactive and adaptive goal-planning.

> For next week, I plan to complete the data analysis assignment using the teacher's provided dataset. I will do this efficiently by following these steps:
> -Read the lecture notes on data analysis.
> -Clean the dataset to ensure it's ready for analysis.
> -Calculate basic statistics for the data. I aim to dedicate one hour each day to this task (GR3ST6RJ5).
>
> Planning is crucial for staying on track and for a comprehensive research proposal by the end of the semester, so I have a week-by-week plan based on course requirements. If I finish my data analysis early by Week 8, I know I am ahead and can allocate more time to refining my proposal and seeking feedback (GR3ST2RJ6).

Coping Strategies. The three SE groups demonstrated distinct coping strategies that aligned with their respective SE levels. Group 1 (low SE) students invested minimal effort, relying solely on textbooks or teacher's notes without seeking additional help. They believed others faced similar challenges and avoided new strategies, assuming they would be ineffective. The passive coping strategies reflected a lack of confidence in their ability to improve through effort, resulting in avoidance behaviors and stagnant learning.

> I didn't understand what the teacher explained in class about obtaining informed consent and ensuring participant confidentiality. I think most of my classmates have the same issue, so I will not discuss it with them. I will read my notes again (GR1ST2RJ8).

> I was unable to follow the instructions on APA format this week. I'm not sure if I can figure out the solution. I will not do anything else. I have a lot of important tasks to complete this week, so if I spend more time on this assignment, my workload will increase unnecessarily and be out of my control (GR1ST5RJ12).

Group 2 (average SE) students showed a strong motivation to avoid negative comments from peers and teachers, leading them to work harder in response to challenges. They frequently sought assistance from classmates or teachers and often borrowed notes to overcome obstacles. Once the challenges were addressed, they were quick to reward themselves. Although often driven by external pressures and reliant on short-term reinforcement, their coping strategies reflected a growing belief in their ability to manage challenges in the RM course.

> I've spent a day drafting the literature review section and am feeling cooped up. I plan to go to a movie. I'm not sure if I'll finish the task tomorrow (GR2ST3RJ3).

> I have difficulty with research designs. I can't select a suitable design for my proposal. I will read all the notes again and again, underlining all the important points. If I don't understand, I will ask my teacher (GR2ST1RJ4).

Group 3 (high SE) students adopted a broader range of strategies, including detailed notetaking and peer discussions to address challenges. When facing increasing difficulty, they prioritized online research for solutions, turning to teacher assistance only as a last resort. They showed adaptability by adjusting their approaches when previous strategies failed. This flexibility and persistence, along with their willingness to experiment with different strategies, reflected a strong belief in their capacity to overcome challenges through effort and strategic problem-solving.

> I noted that I had difficulty refining my topic. I went to YouTube and watched instructional videos. Things turned out not to be too challenging then (GR3ST1RJ4).

> I didn't want to ask my teacher because I didn't want to bother her. I am planning to join a research group meeting next week where I will raise my question. I believe our discussion can help (GR3ST3RJ9).

> I used the instructions given by the teacher to plan the form of my proposal, but it didn't work. I asked my peers for ideas on some of the aspects I had difficulty with. I accomplished the task successfully in the end (GR3ST4RJ2).

Evaluation and adaptation strategies. Differences in self-efficacy levels were reflected in how students evaluated and adapted their learning strategies in the RM course. Group 1 students did not mention evaluating and/or adapting their learning strategies. This absence suggests a limited awareness of the need to reflect on their learning process or a lack of belief in their ability to make meaningful improvements. Both Groups 2 and 3 assessed their strategies, but only Group 3

demonstrated the ability to effectively adjust their methods to achieve their goals. Group 3 students displayed confidence in their capabilities, persistently exploring various approaches to find the most effective solutions. This adaptive flexibility was a key characteristic of their advanced self-regulation and belief in their academic agency.

> I focused on refining my research question. I initially struggled with narrowing down my topic, so I brainstormed various aspects, categorized potential questions, and discussed my ideas with classmates for feedback. I also reviewed existing research in the library to identify gaps. Despite taking longer than expected, the strategies were successful, I believe in my ability to find the direction of my research (GR3ST4RJ5).

> I have a challenge regarding the most suitable data analysis technique for my study. I plan to join a study group to discuss methods with peers, and if that doesn't help, I'll look for online tutorials or lectures for more detailed explanations. I think I can do the task successfully (GR3ST9RJ5).

Group 2 students found it challenging to identify suitable methods for addressing their difficulties, despite being aware of their weaknesses. They relied on help from peers or teachers. This reliance suggests that although they were developing evaluation skills, their confidence in independently managing challenges remained limited.

> I struggled to refine my research question. Brainstorming ideas overwhelmed me with too many possibilities, and my classmates' suggestions didn't help. I feel stuck and unsure of how to proceed, so I plan to talk to the teacher next week (GR2ST3RJ2).

> This week, I attempted to work on statistical analysis techniques but struggled a lot. The teacher is not approachable. When I asked for help, she just referred me to the textbook (GR2ST5RJ6).

> I tried to refine my research question, but it didn't go well. The teacher's explanation was too vague. I didn't understand what was expected, and there were no helpful examples provided. How am I supposed to refine my research question with such little guidance? (GR2ST7RJ3).

Discussion and Implications

This study is the first to explore the impact of SE on SRL strategy use among Vietnamese undergraduates enrolled in a RM course. The current study found that the relationship between SE and SRL was significant after controlling for gender, area of study, and field of study. The qualitative data provided detailed descriptions and comparisons of SE groups in relation to SRL strategy use, thereby addressing a gap in the existing literature.

A key contribution of this study lies in its focus on the RM course, an area that has received

limited direct attention in previous research. While earlier studies (e.g., Lee et al., 2021; Nguyen, 2021; Tran et al., 2023; Utami, 2023) have identified a positive association between SE and SRL in general educational settings, they have primarily relied on simple correlational methods. By employing multiple regression analysis, the present study offers a more robust and nuanced understanding of SE as an independent predictor of SRL strategy use in the RM context.

The findings suggest that SE played an independent role in influencing SRL. Gender, area of study, year of study, and research experience did not significantly predict SRL. This could be due to the homogeneity of the sample. The participants, who were juniors and seniors from the same university, shared a similar research environment and learning experiences. This lack of variability may have limited the ability to detect significant differences among subgroups.

In this study, students with higher SE levels demonstrated more effective use of SRL strategies, as confirmed by both quantitative and qualitative data. Significant differences were observed across all SRL dimensions, showing a progressive increase from low to high SE levels. These results support Bandura's (1997) social cognitive theory, which posits that individuals with greater confidence in their abilities are more motivated and capable of employing effective learning strategies to achieve their goals. The findings also align with Bai et al. (2014), who reported that higher levels of self-efficacy were associated with a more diverse application of self-regulated learning strategies. Furthermore, this study's outcomes are consistent with those of Tran et al. (2023) and Lee et al. (2021), which highlighted that students with lower SE levels demonstrated restricted use of SRL strategies.

The study's integration of qualitative data adds further depth to our understanding of how SE influences SRL in the context of RM education. By comparing students across three SE levels: low, average, and high, the qualitative phase illuminated clear differences in students' use of SRL strategies. Students with higher SE levels were more self-regulated in their goal setting and planning skills, coping strategies, and evaluation and adaptation skills. In contrast, students with lower SE levels exhibited limited use of SRL strategies or faced difficulties in applying them. The qualitative findings gave clear examples supporting Schunk and Ertmer's (2000) assertion that SE plays a crucial role in shaping the use of SRL throughout all phases of goal achievement, as well as Bandura's (1997) and Zimmerman's (2022) claim that positive SE can lead to better SRL strategies. Further research might explore whether the development of effective SRL strategies can in turn enhance students' SE.

Building on these findings, several implications for educational interventions can be drawn to enhance students' SE and promote the use of SRL strategies.

Findings suggest that enhancing students' SE levels has the potential to improve their use of SRL strategies in the RM classes. Targeted SE-building interventions should conduct early assessments of students' SE levels to identify general trends and embed tiered support within the same RM classroom activities. For example, in a literature review task, low-SE students can use structured templates and guiding questions (e.g., "What is the main argument of this source?"), average-SE students can receive general guidance such as sample reviews, and high-SE students can tackle more complex tasks like

critiquing methodologies or identifying contradictions in the literature.

Bandura (1997) proposed cultivating SE through four sources of SE information: mastery experiences, vicarious experiences, verbal persuasion, and physiological and emotional states. Overall (2021) reported that integrating these sources in a research environment could effectively improve research SE among graduate students since they can directly develop students' beliefs in their research skills and their ability to handle future research tasks. This approach was also supported in the Vietnamese context by Phan (2024), who confirmed its benefits for undergraduates enrolled in a research writing course. In RM classes, instructors might consider breaking the research process into manageable steps accompanied by clear feedback (mastery experiences). Fostering a supportive environment in which encouragement from instructors and peers (verbal persuasion), learning opportunities from peers (vicarious experiences), and positive feelings (emotional states) resulting from successful experiences may help boost self-efficacy among all students.

In this study, undergraduates with low SE demonstrated limited effectiveness in using SRL strategies in the RM course. This highlights the need to integrate SRL-focused activities into curricula to help these students set realistic goals, monitor their progress, evaluate learning strategies, and persevere through research challenges. Zimmerman (2002) posited that regulatory skills are teachable and clear instructions can help train students to become self-regulated learners (Tran et al., 2023). Nilson (2013) provided step-by-step guidance on how teachers can transform regular learning activities into SRL strategies, helping students develop a self-regulated approach to learning. In RM classes, SRL learning opportunities should be integrated throughout the course, from the beginning to the end, to ensure students make gradual progress in mastering these strategies. Students, especially those with average and low SE, should be taught to set specific, meaningful research goals. Besides, learning focus should be shifted from grades and peer comparison to personal learning progress or career aspirations. Teachers can encourage students to prioritize personal progress, research skill development, and long-term research aspirations over short-term grade-focused achievements through practical techniques. For example, they can design activities that focus more on highlighting research skill development and effort rather than ranking students against each other. They can also integrate self-assessment activities in which students evaluate their research progress, identify areas for improvement, and reflect on their learning journey to reinforce personal growth in research. In this way, students are trained to practice goal setting, self-control, and decision-making, which are essential elements of SRL strategies.

Collaborative learning should also be encouraged in the RM classes. For students with higher levels of SE and better SRL strategies in the RM classes, educators might consider engaging them as role models to mentor their peers, sharing experiences with students at lower levels. Opportunities for peer teaching allow high-SE students to reflect and feel accomplished, while low-SE students benefit by observing and learning effective SRL strategies from their more capable peers. Furthermore, distributing responsibilities among students with varying SE and SRL levels can motivate all groups to

strive for improvement. For example, assigning group research projects where each member takes on a specific role based on their strengths can encourage collaboration, promote mutual learning, and enhance both SE and SRL across the group.

Limitations and Suggestions for Future Studies

The sample in the present study consisted only of juniors and seniors from a single university, which may limit the representativeness and generalizability of the findings. To improve the validity and applicability of the findings, future researchers might seek to include a more varied sample that represents a range of academic backgrounds and cultural experiences. Additionally, this study explored the impact of SE in SRL strategy use in an RM course. Future research could explore the reciprocal effects, whether SRL strategy use improvements also boost SE. Other psychological variables, such as motivation and personality traits, may play a role in influencing SE. Future studies might consider incorporating longitudinal designs to capture changes in SRL over time and how these changes are influenced by evolving research experience, academic challenges, and exposure to diverse learning environments. Moreover, participants who volunteered to write journal entries may have been more or less reflective and articulate in describing their learning experiences compared to those who did not participate, potentially affecting the accuracy of self-regulation accounts. Future studies should consider strategies to minimize self-selection bias, such as triangulating journal data with classroom observations or instructor feedback. Despite these limitations, this study contributed to an expanded understanding of the impact of SE on the use of SRL strategies among undergraduates taking a RM course within the Vietnamese context.

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Unraveling the New Factors Influencing Public Pension Knowledge: Findings from Japanese university students

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Abstract. Understanding public pension systems at an early age is crucial for life after retirement. However, despite Japan having the fastest ageing population in the world, there is limited research on the actual levels of understanding about public pensions and the determinants of that understanding among Japanese young people. Therefore, this study examines Japanese university students' public pension knowledge in terms of test reliability and validity; the determinants are then analyzed after controlling for individual-specific effects. This study confirms that there are positive correlations between some independent variables related to higher education and levels of public pension knowledge. This study identified new factors that influence public pension knowledge. However, additional investigation is necessary to explore outstanding questions regarding when and where learning about public pension systems takes place and to determine which learning approaches are most effective.

Keywords: pension knowledge, Japanese university students, latent rank theory

1. Introduction

According to the Statistics Bureau of Japan (2022), 28.6% of Japan's population is aged 65 or older, and Japan's population has been decreasing since 2011 due to the country's failure to achieve a fertility rate corresponding to the necessary replacement level. Thus, Japan has the fastest-aging population worldwide.[1] As high life expectancy and low fertility rates are causing the rapid transformation of population age structures, Japan has become the world's most super-aged society. The rapid increase in the proportion of older adults and population decline present various challenges in areas such as social welfare and economic sustainability. Maintaining a solvent public pension system has become a significant social issue. However, although it is common knowledge that the pay-as-you-go system is

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[1]For further information, please refer to the United Nations' website (World Population Prospects). The relevant link is https://population.un.org/wpp/ (accessed 11 March 2025).

sensitive to demographic shifts (Schuetz et al., 2023), the Japanese government and policymakers have not yet established effective countermeasures against this shift. The Japanese government has consistently implemented extensive revisions to pension policies, specifically by reducing the benefits provided by public pension systems and raising the pensionable age, in line with policy changes that have been made in other developed countries. Owing to alterations in the pension framework, a discernible trend has emerged, namely a growing emphasis on individual accountability for life after retirement.

Nevertheless, while the government must responsibly manage the national pension system in order to improve the social security of citizens, the generations still working must contribute to the pension system in order to adequately achieve a comfortable retirement for themselves. Therefore, despite the complexity of the public pension system, young Japanese people who are just starting to contribute to public pensions should think about their own future lives with accurate knowledge of public pension system. Improving individuals' understanding of public pensions can help ensure the sustainability of the public pension system.

Although Japan has the fastest aging population in the world, there is limited evidence regarding young people's actual levels of understanding about public pensions. Additionally, previous research has not measured pension knowledge based on test theory. While most studies on pension knowledge have adapted observed scores or subjective evaluations from questionnaire surveys, they have not assessed the reliability and validity of these measures. Therefore, this study attempts to examine the actual level of young people's pension knowledge and analyze this using test theory in order to provide a more reliable and accurate examination of pension knowledge.

Assuming that an understanding of public pensions contributes to mitigating future financial issues for nations and individuals, it can be inferred that the factors influencing public pension knowledge are a significant concern for all members of society. However, since different countries naturally have different public pension systems, research on public pension knowledge needs to be conducted in accordance with each country's situation and/or policy goals, rather than clarifying the overall generalities of the determinants of public pension knowledge. As described in the next section, although previous studies show that pension communication, such as an annual pension statement, has a real chance of increasing public pension knowledge, exploring other useful tools other than pension statements has become a pressing issue to be addressed in a super-aged society like Japan.

Because knowledge of public pensions is a form of cognitive skill, it is not seen as disconnected from education and learning. Although systematic pension education is not widely available in Japanese schools (Sasaki, 2012; Matsumoto, 2016),[2] it is still possible for this to be achieved. Junior high and

[2] The main reasons for this are 1) the limited number of class hours allocated for social security education in schools, driven by the requirement to adhere to government education guidelines, and 2) the teachers' limited familiarity with public pensions due to the complexities of the pension system.

high school textbooks provide explanations of the public pension scheme, and Japanese universities offer career education as part of their regular curriculum or as extracurricular guidance. Additionally, considering that knowledge regarding social systems is not attained only through formal education, informal education, such as parental relationships and the presence of older friends in individuals' social circles, is likely to also play an important role in helping youth acquire or enhance their understanding of the public pension system, since parents and older friends often care for youth both privately and publicly. This study examines what type of education influences knowledge of the public pension system. By investigating which new determinants other than the provision of information such as official pension statements influence knowledge of the public pension system, this study hopes to contribute unique and valuable research on public pension knowledge and higher education in a super-aged society.

The rest of this paper is organized as follows: Section 2 reviews relevant empirical studies regarding the understanding of public pensions; Section 3 introduces the data and variables; Section 4 explains the empirical method and results; and the final section presents the conclusions.

2. Review of Literature

Given the prospect of all citizens in all developed countries eventually transitioning into retired pensioners, it is unsurprising that pensions have been the subject of much political debate (Piachaud, 1974). Consequently, governments have conducted surveys to evaluate the public's understanding of pension plans. Since the 2000s, several national governments have surveyed knowledge of pensions and attitudes towards them.

For example, a survey called "Attitudes to Pensions" has been conducted triennially three times in the United Kingdom since 2006 (Clery et al., 2007; Clery et al., 2010; MacLeod et al., 2012). In Finland, the Finnish Centre for Pensions actively collects information on pension knowledge and levels of trust in the national pension system (Kahma and Takala, 2012; Takala, 2015; Tenhunen et al., 2017; Palomäki et al., 2020). The Behavioural Economics Team of the Australian Government (2021) examined Australian retirement expectations and attitudes towards the retirement income system. In Japan, although the Ministry of Health, Labor and Welfare (MHLW) has also conducted surveys on the national pension, surveys on pension knowledge have remained at the level of a cursory inspection.[3]

Surveys on pension knowledge and trust should be conducted because governments have no confirmation of how much pension knowledge citizens actually have. Unfortunately, there is no strong evidence from the survey results that most citizens have sufficient pension knowledge. The findings of these surveys suggest that, despite governments implementing pension reforms, individuals may not sufficiently comprehend public pensions. Based on the above results, it may be surmised that knowledge

[3] Specifically, three surveys have been conducted: 1) the Comprehensive Survey of Living Conditions of Pensioners, 2) the Survey on Public Pension Enrolment, and 3) the Survey on the Insured of the National Pension.

of the public pension system among Japanese youth is also inadequate. Additionally, in light of the findings of Sticha and Sekita (2023) and Sekita (2011) indicating that financial literacy levels among Japanese individuals are comparatively low, it can be inferred that a significant proportion of Japanese youth may also possess limited pension knowledge, given their relatively young age and narrow scope of life experiences.

While these preceding studies have employed observed scores or subjective evaluations derived from questionnaire surveys, they have not rigorously evaluated the reliability and validity of these measures. Therefore, this study attempts to examine the actual level of pension knowledge among university students in Japan using test theory.

These reports only assess the extent of pension knowledge and do not thoroughly explore the factors that affect an individual's understanding of pensions. Pensions are frequently perceived as unengaging subjects, leading to a general lack of interest and low motivation among individuals to seek pertinent information actively. Additionally, people may not fully comprehend the intricacies of public pension systems. Therefore, governments promote the dissemination of information regarding public pensions to the public. Governments and public agencies disseminate information through national pension communication campaigns. Atkinson et al. (2012) explain one of the campaign objectives as follows:

> Improving individuals' understanding and knowledge about a pension reform or the operation of a pension system to facilitate their decision-making over both one-off decisions (such as whether to stay in the old pension system or move to the one) and recurrent ones (such as the choice of pension provider and investments). (p. 12)

On the one hand, developing an understanding of public pension schemes is a critical policy aspect in the context of pension reform,[4] on the other hand, researchers have independently verified the effects of providing information on pension knowledge and positive pension decision-making.

In the United States, the Social Security Administration has been sending annual social security statements to eligible workers since 1995. Using the natural experiment method, Mastrobuoni (2011) revealed that, although the statement is insufficient to improve workers' retirement behavior, it positively impacts workers' knowledge of their benefits. Although not a study of the effects of pension statements, some research in America has shown that employer-provided workplace education increases workers' knowledge and understanding of various retirement-related issues (Clark et al., 2012; Collins and Urban, 2016).

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[4] Stevens and Van Assche (2013, p.6) also emphasized as follows: "Pension information is a topical issue, especially since pensions have become more and more complex. One result has been –at least in part– that responsibility and choice has shifted to individuals."

The Swedish *Orange Envelope*, launched in 1999 with Sweden's new multi-pillar pension system, is the world's most famous national pension communication campaign. According to Larsson et al. (2011), the self-reported understanding of the pension system has increased since the introduction of the *Orange Envelope*. The authors also indicate that individuals who use some of the information provided in the *Orange Envelope* possess only marginally better comprehension of the pension system than those who do not use it. Conversely, Nyqvist (2015) argues that Swedish pension reform, which included the *Orange Envelope*, engendered a feeling of insecurity among Swedish citizens.

Various countries other than those mentioned above are engaged in national pension communication campaigns (Atkinson et al., 2012) and are conducting research on the effects of pension statements. Knell et al. (2015) assessed the relationship between pension knowledge and the pension communication campaign in Austria. They concluded that there is "a high degree of uncertainty [on the future net pension replacement rate], insufficient knowledge about the main rules of the new pension system and an only modest influence of better information on behavioral expectations and uncertainty perceptions" (p. 53). Additionally, using Dutch longitudinal data to analyze the causal links between communication and pension knowledge, Debets et al. (2022) revealed that an annual pension statement has a small positive effect on pension knowledge and that pension knowledge positively impacts active pension decision-making. Moreover, using randomized controlled trials in web-monitoring surveys, Usuki et al. (2008) and Nishimura (2018) confirmed the effects of pension information on confidence in the public pension system in Japan.

Overall, providing information such as an annual pension statement, while not necessarily effective, has a real chance of improving knowledge of and attitudes towards public pensions. Additionally, because there are some studies regarding the positive impacts of pension knowledge on pension decision-making or behavior (Chan and Stevens, 2008; Ward, 2009; Murakami et al., 2012; Foster, 2017; Debets et al., 2022; Haupt, 2023), public pension knowledge seems likely to be connected to positive pension decision-making or behavior.[5] However, previous studies have not investigated other useful methods beyond pension statements to improve people's knowledge about public pensions. Therefore, this study attempts to identify new determinants of pension knowledge as predictors of positive pension decision-making in a super-aged society.

[5] Basiglio and Oggero (2020, p1) overview of research investigating the effects of pension information notes that "while many studies show that information provision increases knowledge, the evidence is mixed regarding its effects on behavior."

3. Data and Variables

3.1. Survey Outline

The dataset used in this study was collected in December 2022 by Mynavi Corporation, a reputable Japanese recruitment agency for college students, who collaborated with this study. The Mynavi Corporation compiled primary data on the lifestyles of undergraduate students using web-based questionnaire surveys.[6] The survey participants were third-year Japanese university students. Valid responses yielded 2,490 observations.[7]

Japanese third-year university students are an ideal participant group on which to test knowledge about the Japanese public pension system. The first reason is that almost 100% of Japanese third-year university students are just starting to contribute to the public pension system. They are faced with the daunting task of understanding the complexity of the public pension system and must find a solution to this challenge using or obtaining adequate knowledge.[8] The second reason is that university students have access to various educational opportunities due to their higher education level than would other people with less education. Obtaining various educational opportunities can be considered as a factor of public pension knowledge.

3.2. Dependent Variable

The dependent variable in this study is the ordinal scale of a participant's knowledge of the Japanese public pension system based on information derived from Latent Rank Analysis (LRA). Although the specifics of LRA, based on test theory, will be described in the next section, it is essentially an analysis method used to assess academic achievement on an ordinal measurement scale rather than a continuous scale.

The Mynavi Corporation collected survey data on the students' knowledge of the public pension system. Six questions were asked, covering old-age pensions, disability pensions, survivor pensions, the two-tiered pension system, the pay-as-you-go pension method, and the contribution postponement system (Table 1).

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[6] Report of this survey is published on the website of Mynavi Corporation in Japanese. https://career-research.mynavi.jp/reserch/20230214_44672/ (accessed 11 March 2025)

[7] Upon receiving the data from Mynavi Corporation, I ensured the privacy and confidentiality of all personal information in compliance with Japan's Act on the Protection of Personal Information.

[8] For example, although university students have the right to defer (not exempt) contribution payments if their income is below a certain amount and their application is approved, this system is frequently mistaken for an exemption.

Table 1. Questions regarding Japanese public pension

	Questions	Legal references
Q1	If you have paid the public pension contributions for at least 25 years, you qualify for full old-age pension.	The old-age pension shall be paid when a qualified person reaches the age of 65 years. However, this shall not apply if the period of payment of insurance premiums is less than ten years (National Pension Act, Article 26). If premiums have been paid for less than 480 months, the amount of old-age pension is divided by the number of months (National Pension Act, Article 27).
Q2	If you become disabled due to sickness or injury under the public pension system, disability pension is not paid to you.	Disability pension is disbursed in the event that an individual insured under the public pension system becomes seriously ill or sustains injury, and subsequently suffers from a disability as a result of said sickness or injury (National Pension Act, Article 30).
Q3	If an insured person dies under the public pension system, the dependent spouse caring for children or dependent children are not eligible to receive survivors' benefits.	When an insured person of the public pension system dies, survivors' pension is paid to their dependent spouse taking care of children or to their dependent children (National Pension Act, Article 37).
Q4	If you get a job and join the Japanese Employees' Pension Insurance, you will withdraw from the public pension insurance.	A person falling under one of the following items is insured, that is, covered by public pension insurance: 1)…; 2) Employees' Pension Insurance insured; and/or 3)… (National Pension Act, Article 7).
Q5	Currently, Japan's public pension system is managed on a funding method.	The scheme of Japanese public pension is addressed on the MHLW website as follows: 'A character of the Japanese public pension system is the universal coverage of the Japanese population by a social insurance pay-as-you-go scheme.' https://www.mhlw.go.jp/english/policy/pension/pension/index.html (accessed 8 April 2023)
Q6	Students may be exempt from contribution payments if their income is below a specified amount and their application is approved.	Upon application by an insured person, the MHLW may allow insurance premium payment exemptions for a designated period (excluding the period during which the insured person was a student) (National Pension Act, Article 90).

Note: The translation of the Japanese National Pension Act provided in this document has been adjusted for accessibility in English while endeavouring to maintain the intended meaning of the original text; an official English translation of the act by the Japanese government is not available.

Although the Japanese pension system is complex, basic questions to gauge the pension knowledge of the participants were devised for this survey.[9] Three answer options were provided for each question: "1) Correct," "2) Incorrect," and "3) Undecided." Although there are exceptions, in general the correct answer to every question is "2) Incorrect." Both "1) Correct" and "3) Undecided" are considered incorrect answers. Currently, a categorical variable can assume three different values. To create a dummy variable when the baseline value is not the correct answer, the following rule applies:

> The dummy variable for the correct answer is assigned a value of 1 if individuals select "2) Incorrect" and 0 otherwise.

After analyzing the responses of these participants by LRA, an ordinal scale of a participant's level of knowledge about the public pension system was created. This information is used as the dependent variable in this study.

According to Table 2, Q5 (concerning the pay-as-you-go system) received the highest percentage of correct answers at 39.6%, whereas Q6 (on premium exemptions) received the lowest percentage of correct answers at 19.2%. One possible explanation for these results is that, while students may have some understanding of the pay-as-you-go scheme through various media outlets, they may struggle to differentiate between exemption and postponement because of the intricacies of the Japanese public pension system. The mean percentage of the correctly answered questions was 33.2%. This outcome could be interpreted as suboptimal as participants exhibited less-than-ideal levels of pension knowledge despite their contributions to the public pension system.

Table 2. Percentage of questions answered correctly

	Obs.	Mean	Std. dev.	Min	Max
Q1	2490	0.308	0.462	0	1
Q2	2490	0.387	0.487	0	1
Q3	2490	0.355	0.479	0	1
Q4	2490	0.354	0.478	0	1
Q5	2490	0.396	0.489	0	1
Q6	2490	0.192	0.394	0	1
ALL	2490	1.992	1.852	0	6

3.3. Independent Variables

Because public pension knowledge is considered a cognitive ability, the factors that contribute to the comprehension of public pensions are closely related to education and learning. Consequently, this study

[9] For an overview of the Japanese public pension system, please refer to the Japan Pension Service's website. https://www.nenkin.go.jp/international/japanese-system/nationalpension/nationalpension.html (accessed 11 March 2025)

utilizes formal and informal education variables as independent variables, including career education at university, living with parents, and number of older friends.

The first independent variable was the career education dummy variable (whether or not participants received career education at university). Due to the collapse of the bubble economy in the early 1990s and the 2008 financial crisis, the employment rate of new college graduates deteriorated and became a significant social problem in Japan. As a policy response to this issue, The Ministry of Education, Culture, Sports, Science and Technology amended the Standards for Establishment of Universities in 2010. It required that universities provide students with career education as part of a regular curriculum or career guidance as extracurricular education.[10] Although pension education has no part in the introduction of career education in Japanese universities, education regarding career development encourages positive pension decision-making by increasing interest in financial literacy.

The second independent variable was living with parents. Unlike in other countries, many Japanese university students live with their parents even after entering university. Although some students leave home for college if they enter distant universities, many Japanese university students attend universities near their homes. Leaving aside the question of economic independence from parents or cultural differences, this suggests that students who live with their parents will have more opportunities to receive informal parental education on career development. Such an informal education may result in more positive pension decision-making than students moving away from home to university.

The third independent variable pertained to the number of older friends a participant had. Kadoya and Khan (2019) highlight the importance of social contact and future orientation in enhancing financial literacy in Japan. Having life- or career-guiding mentors may mitigate financial literacy deficiencies. Accordingly, it is postulated that the number of older friends a given participant has will influence their knowledge of the Japanese public pension system.

3.4. Control Variables

The control variables are gender, students' major, university ranking, socioeconomic status (SES), and the results of practice examinations in high school as a proxy for innate ability. As a relationship between gender differences and pension knowledge has already been suggested by previous research (Ward, 2009; Barrett et al., 2015; Li, 2023), this study uses gender difference as a control variable. Additionally,

[10] Both Nakazato (2011) and Miyata (2018) point out that career education at Japanese universities can be divided into eight categories: quality of college life, self-understanding, attitude toward work, perception of the social world, career perspective, corporate etiquette, knowledge of career theory, and job placement assistance. However, due to data limitations, this study cannot determine the specific educational content that students received. Therefore, this study deals with career education in the aggregate rather than analyzing the effects of specific educational content.

an increase in educational opportunities focusing on social security and related fields will enable a greater number of students to acquire knowledge about public pensions. As students' level of public pension knowledge might be affected by their field of study, their choice of major was employed as a control variable. Moreover, if university ranking indicates education quality, there may be a correlation between university ranking and students' public pension knowledge. Therefore, this study utilized university ranking as a control variable to account for this possibility. The ranking data for Japanese universities were obtained from the *University Ranking*, published by Asahi Shimbun Publications.[11] Because this dataset includes university names as common information, it is feasible to merge them with the Mynavi survey dataset.

However, because university ranking is an endogenous variable, there is a risk of omitted variable bias. Commonly omitted variables include SES and innate abilities. Failure to control for these variables may result in findings that do not adequately account for the following:

(1) If SES or personal abilities are already high, regardless of the education level, students can better obtain higher levels of public pension knowledge.

(2) If the education at the top universities is of high quality, students can better obtain higher levels of public pension knowledge.

(3) If students have higher SES or abilities overall, they can better compete for admission to top universities and thus obtain a greater knowledge of public pensions.

Omitted variable bias is a fundamental challenge in educational research. This study utilized information from a questionnaire survey on SES and the results of practice examinations in high schools to overcome this bias. If university ranking and SES (or innate ability) are substitutes, a higher university ranking will significantly improve public pension knowledge when SES (or innate ability) is not included in the estimation. Table 3 depicts the variables used in the estimations and their corresponding descriptive statistics.

[11] The University Ranking incorporates the *Hensachi* score, which is akin to standardized test scores like the SAT in the United States. In Japan, prominent cram schools periodically conduct nationwide practice exams for prospective university applicants; the *Hensachi* score is derived from these tests. The mean *Hensachi* score is 50. It is an index that reflects a participant's position relative to all other applicants and only signifies relative institutional selectivity, unlike other university rankings such as Times Higher Education, Quacquarelli Symonds and U.S. News.

Table 3. Descriptive statistics

Variable	Mean	Std. dev.	Min	Max
Latent rank	2.814	1.620	1	5
Score (the number of correct answers)	1.992	1.852	0	6
Career education	0.580	0.494	0	1
Residence				
Living with parents	0.670	0.470	0	1
Living alone (reference group)	0.280	0.449	0	1
Otner	0.049	0.217	0	1
The number of friends	2.749	3.433	0	20
Female	0.704	0.456	0	1
Major				
Social science (reference group)	0.286	0.452	0	1
International relations	0.100	0.300	0	1
Humanities	0.155	0.362	0	1
Education	0.049	0.217	0	1
Arts	0.028	0.164	0	1
Interdisciplinary studies	0.073	0.261	0	1
Engineering	0.040	0.195	0	1
Math, physics, or informatics	0.049	0.217	0	1
Architecture	0.029	0.166	0	1
Chemistry	0.023	0.150	0	1
Pharmacy	0.066	0.249	0	1
Nursing	0.011	0.105	0	1
Agriculture or biology	0.091	0.287	0	1
University rank	49.703	7.458	35	68
SES				
Very low (reference group)	0.041	0.197	0	1
Below average	0.130	0.337	0	1
Average	0.145	0.352	0	1
Above average	0.340	0.474	0	1
Very high	0.291	0.454	0	1
Don't know	0.054	0.226	0	1
Practice examination in high school				
Very low (reference group)	0.049	0.217	0	1
Below average	0.173	0.378	0	1
Average	0.329	0.470	0	1
Above average	0.297	0.457	0	1
Excellent	0.057	0.231	0	1
Don't know	0.096	0.294	0	1
Number of obvervations (N) =2490				

4. Empirical Methods

4.1. Latent Rank Theory and Analysis

The Latent Rank Theory (LRT) is a test theory for grading academic achievement, not on a continuous scale, but rather an ordinal measurement scale from a test validity and reliability viewpoint. Shojima (2007) published important research on the origins of LRT and Shojima (2022) made the following points:

> When a continuous scale is fed back to two students scoring 73 and 74, respectively, on a 100-point test, it is very difficult to explain in words the difference in ability between 73 and 74. What is the point in giving difference feedback although we cannot express the difference in words? (p. 196)

Although there was a small difference in the test scores between the two students, it could be within the margin of error. In this sense, scores on a continuous scale which only add the number of correct answers is an undesirable measure for evaluating cognitive ability or knowledge. Professors assign students grades on an ordinal scale, such as A+ (excellent), A (good), B (average), C (passing), and F (failure). Additionally, Shojima (2022) pointed out that if the ability level is provided on an ordinal scale, the level required at each grade is easily explained. Although this explanation requires deep expertise in the examination and subject, the difference between grades A and B is clear and understandable compared to the difference between 73 and 74 points. If statistical data support the required ability in each grade, an ordinal scale visualizes the pathway from the start to the goal of learning, such as the Common European Framework of References' can-do statements.[12]

An empirical analysis of the LRT can be conveniently achieved by employing *Exametrika* software developed by professor Kojiro Shojima. This software was downloaded from Shojima's website (http://shojima.starfree.jp/exmk/). In order to evaluate participant groups' public pension knowledge, this study employs *Exametrika* version 5.5 to analyze the comprehension of public pensions.

4.2. Ordered Logistic Regression

Given that the dependent variable is an ordinal measurement scale created by the LRA, this study necessitates the application of an ordered logistic regression model. We assume $y_i = j(1, 2, 3, 4, 5)$ for (poor, average, good, very good, and excellent), respectively. The values of 1 to 5 do not hold meaning on a numerical scale but are ranked from lowest to highest. These categories do not share equal intervals, as the discrepancy between "poor" and "average" may not be equivalent to the difference between "average" and "good." We defined y^* as a continuous latent variable. The latent variable model is as follows:

[12] The Common European Framework of Reference for Languages (CEFR) is an international standard developed by the Council of Europe for describing language proficiency levels. The CEFR is widely used in European and other countries to assess language ability. The CEFR divides language proficiency into six levels, namely A1, A2, B1, B2, C1 and C2. Each level represents a different degree of language ability, with A1 being the lowest level and C2 the highest (Council of Europe, 2001; Council of Europe, 2020).

$$y_i^* = \alpha + \beta x_i + e_i \tag{1}$$

$$y_i = j \quad if \quad u_{j-1} < y^* \leq u_j \tag{2}$$

where α is an intercept term, x_i represents the independent variables, e_i is the error term, and u is the cutoff point. The latent continuous variable y^* is unobserved. Although the latent continuous variable y^* cannot be observed, we can observe y_i when y^* crosses the threshold. Therefore, the choice rule is as follows:

$$y_i = \begin{cases} 1 & poor \quad if \quad y^* \leq u_1 \\ 2 & average \quad if \quad u_1 < y^* \leq u_2 \\ 3 & good \quad if \quad u_2 < y^* \leq u_3 \\ 4 & very\ good \quad if \quad u_3 < y^* \leq u_4 \\ 5 & excellent \quad if \quad u_4 < y^* \end{cases} \tag{3}$$

Incidentally, the rearrangement of Equations (1) and (2) is as follows:

$$u_{j-1} - \alpha - \beta x_i \leq e_i < u_j - \alpha - \beta x_i \tag{4}$$

The probability that observation *i* will select alternative *j* is:

$$Pr(y_i = j) = Pr\left(u_{j-1} < y^* \leq u_j\right) = F\left(u_j - \alpha - \beta x\right) - F\left(u_{j-1} - \alpha - \beta x\right) \tag{5}$$

where *F*( ) is the cumulative distribution function of logistic distribution. Using a generic representation, the respective probabilities for each category are described as follows:

$$\begin{aligned} Pr(y_i = 1) &= F(u_1 - \alpha - \beta x) \\ Pr(y_i = 2) &= F(u_2 - \alpha - \beta x) - F(u_1 - \alpha - \beta x) \\ Pr(y_i = 3) &= F(u_3 - \alpha - \beta x) - F(u_2 - \alpha - \beta x) \\ Pr(y_i = 4) &= F(u_4 - \alpha - \beta x) - F(u_3 - \alpha - \beta x) \\ Pr(y_i = 5) &= F(\alpha + \beta x - u_4) \end{aligned} \tag{6}$$

This study analyzed the determinants of public pension knowledge. All statistical analyses of ordered logistic regression were conducted using Stata version 17.0.

5. Empirical Results

To perform the analysis, it was crucial to determine the optimal number of latent ranks. Considering the six questions in total, with scores ranging from zero to six (lowest to highest) for public pension comprehension, there were seven possible scores. Hence, the latent rank numbers under consideration included 2, 3, 4, and 5. To select the optimal number, several fit indices, such as the Akaike information criterion (AIC), conditional Akaike information criterion (CAIC), and Bayesian information criterion (BIC) were used. These indices provide a basis for model selection and enable researchers to determine the most appropriate model for a given dataset. It is widely accepted that a lower AIC, CAIC, or BIC score is preferred (Akaike, 1998; Bozdogan, 1987; Schwarz, 1978). The students were classified into five ordinal groups based on the results presented in Table 4.

Table 4. Test fit index

Rank	AIC	CAIC	BIC
2	1626.34	685.18	823.18
3	1329.38	429.14	561.14
4	1241.34	382.01	508.01
5	1192.40	373.99	493.99

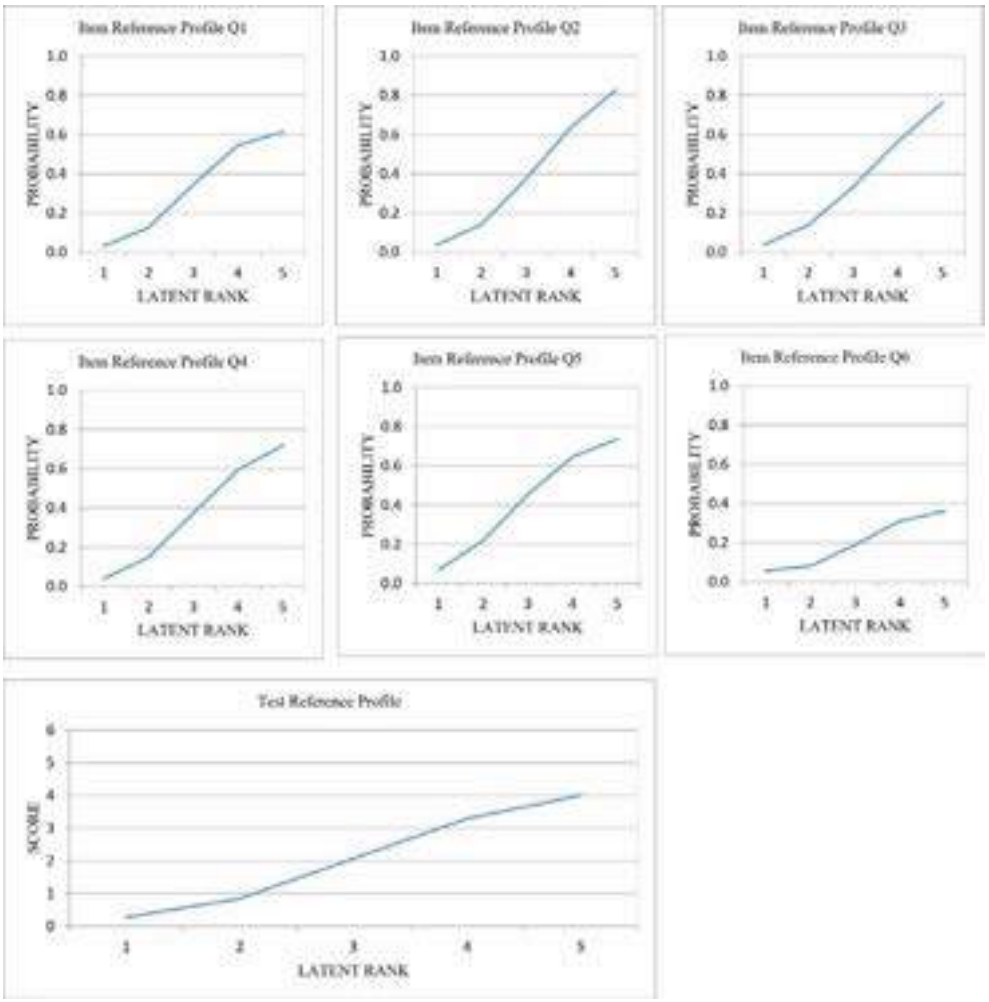
Note: AIC (Akaike information criterion), consistent AIC (CAIC), and Bayesian information criterion (BIC) were used for model selection. The lower these numbers, the more accurate the fit measurement.

The item reference profile (IRP) calculated by *Exametrika* was used to interpret correct answer rates. IRP plots the probability that a test item is answered correctly. (Table 5 and Figure 1). A weak ordinal alignment condition is also a prerequisite for latent rank analysis. Shojima (2008) points out that "the weak condition is satisfied when the test reference profile (TRP) is monotonically increasing but every IRP is not necessarily monotonic, where the TRP is the weighted sum of the IRPs of the test items" (p. 5). Following Shojima's (2008) postulation, the weak ordinal alignment condition of the model was fulfilled (Figure 1). As clarified above, this study adequately measured students' basic knowledge of Japanese public pensions.

Table 5. Item reference profile

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
Q5	0.070	0.218	0.455	0.647	0.734
Q2	0.036	0.142	0.373	0.634	0.826
Q3	0.038	0.137	0.332	0.564	0.760
Q4	0.039	0.148	0.374	0.593	0.718
Q1	0.031	0.124	0.343	0.546	0.611
Q6	0.056	0.080	0.189	0.310	0.361

Figure 1. Item reference profiles and test reference profile



Based on the results of LRA, the participants were divided into five ordinal groups (Table 5). Rank 1 consisted of students who were unlikely to choose the correct answer to all the questions. In this group, the average probability of each question being answered correctly was approximately 5%. Rank 2 also comprises students who would likely not choose the correct answer for all questions. However, unlike Rank1, the probability of each question being answered correctly for this group is approximately 14% on average. Rank 3 consists of students who score an average on all questions except Q5 (the question regarding the pay-as-you-go pension method). In this group, the average probability of each question being answered correctly was approximately 34%. Rank 4 comprised students who chose the correct answer for all questions above average, except for Q6 (the question regarding the contribution postponement system). In this group, the average probability of each question being answered correctly was approximately 56%. Rank 5 consisted of students likely to choose the correct answer to all questions except Q6. In this group, the average probability of each question being answered correctly was approximately 67%.

By examining the item reference profile graph (Figure 1), it is evident that the plot for Q6 displays a less pronounced incline than the other plot profiles. This means that Q6 was difficult for the participants to answer correctly, regardless of their abilities or knowledge. Participants may struggle to differentiate between exemptions and extensions due to the complexities of the Japanese public pension system.

Table 6 presents the results of ordered logistic regression estimation.[13] The omitted variable bias was confirmed before examining the determinants of public pension knowledge. The first column in Table 6 lists the findings of the basic equation (Model 1). Furthermore, Model 2 incorporated SES while controlling for the variables contained in Model 1. Model 3 included the outcomes of practice examinations in high school while controlling for the variables presented in Model 1. Finally, Model 4 includes both SES and the outcomes of practice examinations in high school while controlling for the variables introduced in Model 1. Consequently, it was observed that the coefficient for university ranking is attenuated with the addition of the results of practice examinations in high school and does not retain its statistical significance in Models 3 and 4. These outcomes suggest that, although there is an omitted variable bias in the estimation process when the results of practice examinations in high school are absent, such a bias can be effectively mitigated in this analysis. Therefore, this study adequately analyses the determinants of public pension knowledge.[14]

[13] Since the total score of each participant is considered a candidate for the dependent variable, the ordinary least squares estimate (Model 5) is presented as an alternative estimate in Table 6. The result remains largely unchanged.

[14] The proportional odds assumption, which states that there is no difference in the coefficients across categories, is a key assumption in ordered logistic regression models. Violation of this assumption means that the effect of the predictors differs across levels of the outcome. This can lead to biased estimates and/or a poor model fit (Bender & Grouven, 1998; Bender & Benner, 2000). To test this assumption in Model 4 estimation, the Brant test is conducted. The null hypothesis that there is no difference in the coefficients across categories was not violated (chi-square value: 35.53, p-value: 0.0609), so the proportional odds assumption is satisfied in Model 4.

Table 6. Estimation results

	Model 1	Model 2	Model 3	Model 4	Model 5
	Coef.	Coef.	Coef.	Coef.	Coef.
Estimation method	ologit	ologit	ologit	ologit	OLS
Dependent variable	Latent rank	Latent rank	Latent rank	Latent rank	Total score
Career education	0.218 **	0.214 **	0.214 **	0.211 **	0.183 *
	(0.079)	(0.079)	(0.079)	(0.079)	(0.079)
Residence					
Living with parents	0.193 *	0.196 *	0.198 *	0.201 *	0.224 **
	(0.083)	(0.083)	(0.084)	(0.084)	(0.082)
Otner	0.267	0.261	0.267	0.262	0.328
	(0.193)	(0.193)	(0.193)	(0.193)	(0.184)
The number of friends	0.031 **	0.031 **	0.031 **	0.031 **	0.027 *
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Female	-0.268 **	-0.272 **	-0.269 **	-0.273 **	-0.341 ***
	(0.087)	(0.087)	(0.087)	(0.087)	(0.089)
Major	Yes	Yes	Yes	Yes	Yes
University rank	0.012 *	0.012 *	0.007	0.008	0.011
	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)
SES					
Below average		-0.145		-0.142	-0.108
		(0.207)		(0.207)	(0.204)
Average		-0.239		-0.239	-0.235
		(0.208)		(0.209)	(0.201)
Above average		-0.163		-0.162	-0.134
		(0.194)		(0.195)	(0.188)
Very high		-0.221		-0.219	-0.218
		(0.196)		(0.197)	(0.189)
Don't know		-0.315		-0.278	-0.182
		(0.250)		(0.252)	(0.243)
Practice examination					
Below average			-0.022	-0.020	0.003
			(0.191)	(0.190)	(0.186)
Average			0.050	0.052	0.030
			(0.184)	(0.184)	(0.179)
Above average			0.115	0.116	0.139
			(0.194)	(0.193)	(0.187)
Excellent			0.221	0.228	0.269
			(0.251)	(0.250)	(0.250)
Don't know			-(0.146)	-(0.132)	-(0.097)
			(0.210)	(0.210)	(0.207)
_cons					1.665 ***
					(0.387)
Observations	2490	2490	2490	2490	2490
Wald chi2/F statistics	73.76 ***	76.95 ***	78.89 ***	81.81 ***	3.56 ***
Log pseudolikelihood	-3725	-3723	-3722	-3721	-5022

Note: Robust standard errors are indicated in parentheses. *significant at 5%; **significant at 1%; *** significant at 0.1%. Although major dummy variables were included in the estimation, they were not reported for convenience.

The empirical results in Table 6 show positive correlations between independent variables (career education, living with parents, and number of older friends) and the rank of public pension knowledge. This analysis yields predictable results. Ascertaining the coefficients in ordered logistic regression is often complex; thus, calculating the marginal effects is recommended to understand the magnitude better. The marginal effects of Model 4 (presented in Table 7) produce the following results: 1) Students who received career education have a 3.8% higher probability of obtaining rank 5 than students who did not

receive any career education; 2) the probability of obtaining Rank 5 for students who live with parents is 3.6% higher than for students who have moved away from home for university; and 3) an increase of one friend who is older than a given participant increases the probability of obtaining Rank 5 by 0.6%.

Table 7. Marginal effects (Model 4)

	Rank 1 dy/dx	Rank 2 dy/dx	Rank 3 dy/dx	Rank 4 dy/dx	Rank 5 dy/dx
Career education	-0.048 **	-0.004 *	0.002 *	0.011 **	0.038 **
	(0.018)	(0.002)	(0.001)	(0.004)	(0.014)
Residence					
Living with parents	-0.046 *	-0.004 *	0.002 *	0.011 *	0.037 *
	(0.019)	(0.002)	(0.001)	(0.005)	(0.015)
Otner	-0.060	-0.005	0.003	0.014	0.048
	(0.044)	(0.004)	(0.002)	(0.011)	(0.035)
The number of friends	-0.007 **	-0.001 **	0.000 *	0.002 **	0.006 **
	(0.002)	(0.000)	(0.000)	(0.001)	(0.002)

Notes: Standard errors are in parentheses. *significant at 5%; **significant at 1%; *** significant at 0.1%. Although the control variables were included in the estimation, they were not reported for convenience.

6. Conclusions

While many studies have assessed pension knowledge using observed scores or subjective evaluations from questionnaire surveys, they have not adequately evaluated the quality of these measures in terms of test reliability and validity. In contrast, this study employs LRT, a test theory, in order to analyze Japanese college students' knowledge of the public pension system. This approach provides a more reliable and accurate assessment of public pension knowledge than those achieved in previous studies.

The average number of correctly answered questions is approximately 33%. This outcome is unfavorable, as it indicates that participants commence their pension contributions with less-than-ideal knowledge about public pensions. The question regarding extensions for pension payments proved to be significantly more difficult for the test participants.

Part of the reason for this, regardless of the participant's abilities, seems to stem from confusion between the concepts of exemption and extension, which could have serious social consequences. Exemption from contribution payments means that individuals whose income is below a certain threshold can be exempted from full or partial contribution payments. The periods during which exemptions are granted are considered qualifying periods for retirement pensions. The extension of contribution payments applies to students who may be allowed to postpone their contributions. However, such periods of non-payment are not reflected in the amount of the retirement pension unless an individual makes retroactive payments for the non-payment period within 10 years.[15] In addition, the

[15] For an overview of the Japanese public pension system, please refer to the Japan Pension Service's website. https://www.nenkin.go.jp/international/japanese-system/nationalpension/nationalpension.html (accessed 11 March 2025)

extension of contribution payments results in a dual burden after graduation. As the Japanese labor market operates primarily on the basis of seniority rather than skill or ability, new graduates are typically hired as full-time employees and can be expected to be promoted over time. Therefore, their initial wages are low and gradually increase. In other words, graduates who defer contribution payments during their school days may face the issue of a double payment burden within 10 years of graduation due to lower initial salaries upon entering the workforce.

This study shows that many Japanese university students confuse the concept of pension extensions with exemptions. If they do not make a supplementary payment within 10 years due to a lack of knowledge, their retirement pension benefits will decrease, and pension finances might be negatively affected. Hence, understanding the public pension scheme is crucial for individual workers' careers and society as a whole. Japanese university students face a significant challenge in terms of their lack of knowledge about public pensions, which is crucial for mitigating future problems with the system.

Additionally, this study examines the determinants of public pension comprehension while controlling for individual-specific effects. Owing to the lack of opportunities for systematic pension education as part of formal education in Japan, the present research seeks to identify new determinants of pension knowledge from relevant information, including career education and living arrangements with parents. The results of this study imply that career education in university fosters a better understanding of public pensions. Despite the scarcity of systematic pension education within formal education in Japan, career education in universities significantly benefit pension knowledge and understanding. Career education, which provides opportunities for students to consider future career possibilities, may provide the potential for improving pension knowledge as a safety-net for old-age. Another plausible alternative is that career education affects pension knowledge through a mediator. Although this mediator variable cannot be identified due to data limitations, career education still has an indirect effect. Therefore, higher education can be considered important policy tools to help mitigate future issues regarding public pensions.

Moreover, the results indicate that informal education is also an important factor in increasing public pension knowledge. Although previous research on pension knowledge indicates that individuals generally do not have sufficient knowledge of their own pensions and pension reforms, this does not mean that all parents and friends lack knowledge of public pensions. In addition, because all citizens of Japan are obligated to contribute to the public pension system at age 20, our research participants, who are third-year Japanese university students, have just contributed to the public pension system. They may be confused by complexity of public pension system and expect to have opportunities to learn about the system. However, given the limited availability of systematic pension education in Japanese schools, as previously mentioned, students may seek guidance from their immediate social network. If so, relationships with parents and older friends can potentially expand students' understanding of public pensions, because research on social networks and informal learning assumes that family and friends play an important role in the learning process (e.g., Wellman, 1999; Banks et al., 2007). In the case of

knowledge acquisition, parents and older friends can serve an important function as mentors. Social networks and informal learning are fundamental to improving public pension knowledge.

Only a preliminary assessment of the interpretations and conclusions can be provided. Further research is required to address unresolved issues concerning the timing and location of public pension system learning, as well as to identify effective learning strategies. Additionally, the effects of specific career education content remain unknown. University career education includes curriculum-based education and extra-curricular support. This study could not focus on specific career education content. This limitation is inherent in the study's conclusions and further research is needed to determine the most effective and efficient educational content. Moreover, there were limitations to this study, such as the inability to establish a causal relationship owing to data constraints. Therefore, the findings of this study must be interpreted with caution in the context of these limitations.

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Study Motivations, Academic Experiences, and Career Aspirations of International Students in China

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Abstract. This study examined the characteristics of the study abroad process for international students in China, focusing on their study motivations, experiences, and career aspirations, by academic degree level. It also investigated differences among these degree levels. Although previous research has addressed international students in China, comparative analysis across degree levels is lacking. This study fills that gap by analyzing interviews with non-degree, undergraduate degree-seeking, and graduate degree-seeking international students. Semi-structured interviews were conducted, and the data were analyzed using the modified grounded theory approach. Results showed that the study abroad process is highly complex and varies depending on the students' degree level. Study motivations are influenced by a complex interplay of personal, social, and facilitating factors. During their time abroad, students encounter both positive and negative experiences. As their intercultural understanding and personal values evolve, they consider their future careers and form career aspirations.

Keywords: academic experience; career aspirations; international students; qualitative analysis; study motivation

Introduction

China is the world's largest outbound country for international students in higher education; however, in recent years, it has been gaining prominence as an inbound destination. According to UNESCO statistics, the number of inbound internationally mobile students in China was 36,386 in 2006, but by 2022, it had sharply increased to 210,903 (UNESCO, 2024). This figure surpasses the numbers for Japan and South Korea, and China ranks among the top OECD countries worldwide (OECD, 2023). However, it took many years for the number of international students in China to reach this level (Ji, 2016; Lu,

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2019). Since the country's founding in 1949, education for international students in China has been used as a diplomatic tool by the central government, with the students' countries of origin and intake numbers carefully controlled. The growth of international education was relatively slow and stagnated during the Cultural Revolution that started in 1966. However, after the Reform and Opening-Up policy was introduced in 1978 international student education began to grow. Notably, recent years have seen significant progress: the "Study in China Plan" announced by the Ministry of Education in 2010 and the implementation of the "Belt and Road Education Action" in 2016 have greatly increased the scale of international education, the variety of source countries, student demographics, and scholarship opportunities. China's rise as a popular destination for international students reflects state-led efforts to strengthen international political and academic relations (Pan, 2013; Wen et al., 2018; Zhang & Liao, 2021).

According to the data from the Ministry of Education of China (2019), most international students in China belong to Asian countries, such as South Korea, Thailand, and Pakistan. However, the source countries are unbalanced, with a low proportion of undergraduate and graduate students pursuing their studies. Increasing the number of undergraduate and graduate international students has become an important issue not only for China but also worldwide. This is because highly educated international students are more likely to stay in the host country, join its labor market, and contribute to economic growth and innovation (OECD, 2023). To develop effective policies, it is necessary to understand the study motivations and learning experiences of international students enrolled in undergraduate and graduate programs. Although existing studies have examined international students in China, they often lack comparative analysis across degree levels. To address this gap, this study established three research questions: (1) Difference in Study Motivation by Degree Level: Why do international students choose China as their study destination, and why did they select their current university? How do these motivations differ among non-degree, undergraduate, and graduate students? (2) Difference in Study Experience by Degree Level: What academic and daily life experiences do international students have, what aspects are they satisfied with, and what challenges do they face, and how do these experiences differ across degree levels? (3) Difference in Career Aspirations by Degree Level: What career paths do international students aspire to, how do they think their study experience in China will influence their future, and how do these career aspirations and perceived impacts very among degree levels? To explore these questions, this study reports on a qualitative investigation of international students.

Literature Review

Several studies have examined international students' motivations. The "push–pull model" is a popular framework for understanding students' choices to study abroad. Push factors, which stem from students' home countries, motivate the decision to study abroad. These include, for example, a lack of available educational institutions domestically and the absence of specific courses at home. Conversely, pull

factors related to the destination countries and enhance their appeal. These include, for example, the high quality of education at the host country, the strong reputation of its institutions, easy access to information, recommendations from family or friends, a safe living environment, the perception that it is an exciting and enjoyable place to live, and the presence of friends or relatives already living there (Altbach, et al., 1985; Mazzarol & Soutar, 2002).

In a 2013 survey, Ding (2016) identified key motivations for students to study in China, including learning Chinese, Shanghai's status as an international city, quality universities, China's economic growth, and available programs. These are pull factors of the host country. However, since the survey results were not analyzed by degree level, it is unclear if differences exist among levels. Jiani (2017) studied 42 international students in Beijing, exploring their motivations for choosing mainland China as a study destination. Motivations included external factors, such as limited access to higher education at home, and an attraction to China's development and language learning, as well as individual factors, including career growth, cultural exploration, and reconnecting with one's Chinese cultural identity. Luo and Sawamura (2021) interviewed 12 African students at Xiamen University and identified four motivation types from a push–pull perspective: second-chance, career development, language/culture/city interest, and family strategy. However, they did not analyze motivation based on degree levels, so differences remain unexplored.

The same issue applies to studies on international students' learning and daily life. Wen et al. (2018) conducted a survey in 2012 to analyze international students' sociocultural adaptation and learning satisfaction. Comparing students who took classes with their Chinese peers and those who took classes with only other international students, the former group demonstrated higher intercultural understanding and communication skills. Additionally, international students' learning satisfaction was influenced by factors, such as student–faculty academic contact, student–faculty social contact, and the language of instruction. In a survey by Shi (2018), international students expressed satisfaction with aspects, such as the facilities (e.g., libraries), and the friendly attitude of Chinese students, but were dissatisfied with university administrative services, career support, and psychological counseling. They also hoped for improvements in student management systems, dormitory facilities, and better integration into Chinese society. Luo and Sawamura (2021) also identified the benefits gained from studying abroad, including (1) improved intercultural understanding and relativization of one's own culture, (2) acquisition of specialized knowledge and boosted confidence in abilities, (3) access to high-quality university education, and (4) China's rapid development. However, these studies also did not conduct analyses based on the degree levels.

Various factors influencing students' postgraduate career decisions have also been identified. Liang and Wang (2023) surveyed 692 international students at two "Double First-Class" universities in China using binary logistic and ordinal logistic regression models to analyze factors affecting their post-graduation career choices and intention to stay in China. The analysis showed that variables like age, gender, receiving government scholarships, and the size of one's social network of Chinese friends or

acquaintances significantly influenced international students' career decisions. However, this study also does not differentiate between different degree levels. Luo (2022) interviewed five African graduate students and examined factors influencing the transition from education to employment using a push–pull model and the Systems Theory Framework. Luo categorized these factors into four types based on personal and environmental factors. However, this study targeted only graduate students.

In summary, although several studies have been conducted on international students' motivations, experiences, and employment in China, the lack of comparative analysis among degree levels is evident. To bridge this gap, this study divided international students into three groups, these being non-degree students, undergraduate degree-seeking students, and graduate degree-seeking students, and analyzed the interview results for each group.

Methods

Data Collection

Interviews were conducted in Shanghai between March and June 2024. Shanghai is a major metropolis with a population of over 24 million and is home to many international students. The study participants were international students at two universities in Shanghai. University A is ranked 45th globally in the QS World University Rankings 2024 and 4th in China in the Shanghai Ranking, making it a top comprehensive university. University B was ranked 1201–1400th globally and 96th in China and is a government-affiliated "Double First-Class" language university. Both universities host more than 2,500 international students worldwide. Participants were recruited through snowball sampling. To gather samples from as many countries as possible, we asked participants to introduce international students from countries other than their own, if possible. We conducted 1-hour semi-structured interviews (face-to-face or online) with five non-degree students, 12 undergraduate degree-seeking students, and 12 graduate degree-seeking students. As shown in Table 1, the participants' academic majors tend to be in the social sciences, and all are enrolled at two universities in Shanghai. Therefore, the findings primarily reflect the characteristics of international students in the social sciences within Shanghai.

The interviews addressed the three stated research questions. This study was reviewed and approved by the Research Ethics Committee of the authors' institution.

Table 1. Participants' Demographic Information

ID	Gen	Age	Nationality	Length of stay	Univ.	Major (Teaching Language)
Non-degree seeking international students						
N1	M	28	Norway	1 month	A	Finance (English)
N2	M	21	Romania	2 months	A	Economics (English)
N3	M	19	France	1 month	A	International MBA Program (English)
N4	M	20	Iran	2 months	A	Chinese Language Training
N5	M	21	France *	6 months	A	Chinese Language Training
Undergraduate degree-seeking international students						
U1	M	23	Japan *	9 years	B	French
U2	F	21	Indonesia *	6 months	A	Marketing
U3	M	21	Thailand	1 year	A	Business English
U4	F	21	Russia	3 years	B	International Chinese Education
U5	M	21	Vietnam	6 months	B	International Chinese Education
U6	F	21	Japan	1 year	A	International Relations
U7	F	23	Indonesia *	2 years	A	Finance
U8	F	20	Vietnam	2 years	B	International Chinese Education
U9	M	23	South Korea	5 years	B	International Economics and Trade
U10	F	23	Italy *	3 years	B	Chinese-English Translation
U11	F	26	Tajikistan	1 year	B	International Chinese Education
U12	M	22	Japan *	9 years	B	Spanish
Graduate degree-seeking international students						
M2	F	25	Thailand	5 years	B	International Chinese Education
M3	F	28	Vietnam	1 year	B	International Chinese Education
M4	F	24	Turkey	2 years	B	International Chinese Education
M5	M	23	Japan *	10 years	A	Public Policy
M6	F	21	Kyrgyzstan	1 year	B	International Chinese Education
M7	M	21	Kazakhstan	6 months	B	International Economics and Trade
M8	M	24	Spain	6 months	A	Finance (English)
M9	M	44	Liberia	6 months	A	Law (English)
M10	F	23	Japan	11 years	B	International Chinese Education
M11	F	27	Germany	6 months	A	Chinese Literature
M12	M	23	New Zealand *	11 years	A	Public Policy
M13	M	25	Argentina *	13 years	A	International MBA Program

*=overseas Chinese students
A=University A
B=University B

Data Analysis

We employed the modified grounded theory approach (M-GTA) to analyze the data. The grounded theory approach (GTA), developed in the 1960s by American sociologists Barney G. Glaser and Anselm L. Strauss, is a social research method that enables theory generation from data analysis. It is considered well-suited for research involving social interactions in fields such as education, caregiving, and clinical psychology (Kinoshita, 1999). While maintaining the GTA's basic framework, Kinoshita developed the M-GTA as a modified version (Kinoshita, 2007, 2020). Currently, analyses using the M-GTA are being conducted in various research domains (Hiromatsu & Ozawa, 2020; Suzuki, 2020). M-GTA does not fragment the primary data during the coding process. This is because fragmented data can distort the codes in the original data, making it difficult to deepen the interpretation in the later stages of the analysis. Rather, M-GTA uses a unique method for generating the codes (referred to as "concepts" in M-GTA) from concrete examples in the primary data.

The procedure for analysis using M-GTA is as follows (Kinoshita, 2007, 2020): 1) Identify the variations (concrete examples) related to the analysis theme from the verbatim transcript data. 2) Use an analysis worksheet to generate the "concepts." First, extract similar concrete examples from the data and copy them into the "variations" column of the analysis worksheet. Next, consider their meaning and write a short sentence in the "definition" column. Then, condense the content of the "definition" into a concise expression and write it in the "concept" column. Each worksheet yields a single concept. During this interpretative work, various themes and questions will emerge, which are recorded in the worksheet's "theoretical memo" column. 3) Continue generating the concepts while comparing them with the others and performing the absorption, integration, or elimination of concepts as needed. Stop when new concepts cease to emerge. 4) Summarize the related concepts into "subcategories" and then into broader "categories." 5) Create a "model diagram" illustrating the relationships between the categories. 6) Write a "storyline," that is, a narrative that summarizes the relationships among the generated concepts and categories. In the model diagram, we added arrows to indicate areas where a moderate relationship is assumed to exist. However, since this is a small-scale qualitative study, the arrows only represent tentative associations inferred from the analysis of the verbatim transcript data, rather than implying any causal relationships.

Findings

Using the M-GTA methodology, we analyzed the interview data from five non-degree students, 12 undergraduate students, and 12 graduate students. We present the model diagrams and storylines for each group below. In each model diagram, from top to bottom, the stages are ordered as pre-study abroad, during study abroad, and post-study abroad career aspirations, indicating the relationships among the concepts and categories. In the storyline text, concepts are indicated with 『 』, subcategories with 〈 〉, and categories with 【 】. Direct quotations of specific examples are denoted with quotation marks " ". Ellipses "..." indicate the omitted parts of the quotations. The interviewee's ID is shown in parentheses.

Non-degree International Students

Interviews with five non-degree international students yielded 31 concepts, 11 subcategories, and six categories (see Figure 1).

Storyline

The motivations of international non-degree students in China consisted of 【Personal factors】 and 【Facilitating factors】. The term 【Personal factors】 refers to the individual interests, preferences, and aspirations of international students, whereas the term 【Facilitating factors】 indicates institutional and systemic elements within the host country. Personal factors comprise three subcategories: 〈Cultural

and Life Experiences〉, 〈Career Development〉, and 〈Chinese Language Acquisition〉. Cultural and Life Experiences include the concepts of the 『Desire to Live in China』, 『Curiosity about the Chinese Culture』, and 『Charm of Shanghai』. Career Development concerns students' attempts to leverage a 『Deep Understanding of the Chinese Economy』 for future career development. Finally, Chinese Language Acquisition includes concepts like 『Desire to Conduct Business in Chinese』 and 『Desire to Communicate in Chinese』.

The category 【Facilitating factors】 serves to support and reinforce personal factors. These include 〈Low Entry Barriers〉, such as 『Ease of the Study Abroad Application Process』, 『Affordability of Study Abroad』, and 〈Quality of Higher Education〉. For example, one student was motivated by a love for Asia and a desire to live in China: "I really want to move to China. Since I grew up in the Philippines, I love Asia. For me, China may be one of the most livable countries in Asia. I want to move there for my higher studies and get to know the locals, so I'm more interested in China than other countries." (N3). Meanwhile, another student was driven by the need to learn Chinese for future business: "I'm planning to join my parents' business in the future. Their business involves dealing with many Chinese stakeholders, so if I gain proficiency in Chinese, I think that dealing with our Chinese customers will be much smoother." (N5).

During their study abroad experience, non-degree international students experienced both 【Positive Experiences】 and 【Negative Experiences】. The term 【Positive Experiences】 describes experiences that involve positive emotions like joy, satisfaction, a sense of achievement, and hope. Conversely, the term 【Negative Experiences】 refers to experiences marked by negative emotions such as discomfort, distress, sadness, anger, anxiety, and fear. These experiences are composed of three aspects, namely learning, life, and interpersonal relationships. In terms of learning, students highlighted the positive aspects of the instructors' language use and interaction, such as the 『Teacher's English Proficiency and Kindness』 as well as 『Low Learning Stress』. However, they also faced challenges, particularly 『Lack of Information』. Regarding daily life, students appreciated the 『Convenience of Life』 but also pointed out that compared with universities in their home countries, they had access to 『Limited Student Activities』. In terms of interpersonal relationships, while some students acknowledged the 『Friendliness of Chinese People』, others felt that there was a 『Lack of Opportunities to Interact with Chinese Students』. These positive experiences were often perceived as 『Experience Beyond Expectations』. Meanwhile, the underlying cause of many 【Negative Experiences】 was 『Language Barriers』. For example, as negative experiences, one student pointed out the lack of information about course credits: "I couldn't find any information about my classes on the college website, so I was unaware of several aspects until they began. I needed the course credit information so that my Norwegian school would approve the credit transfer, and I was confused since I couldn't find anything online." (N1).

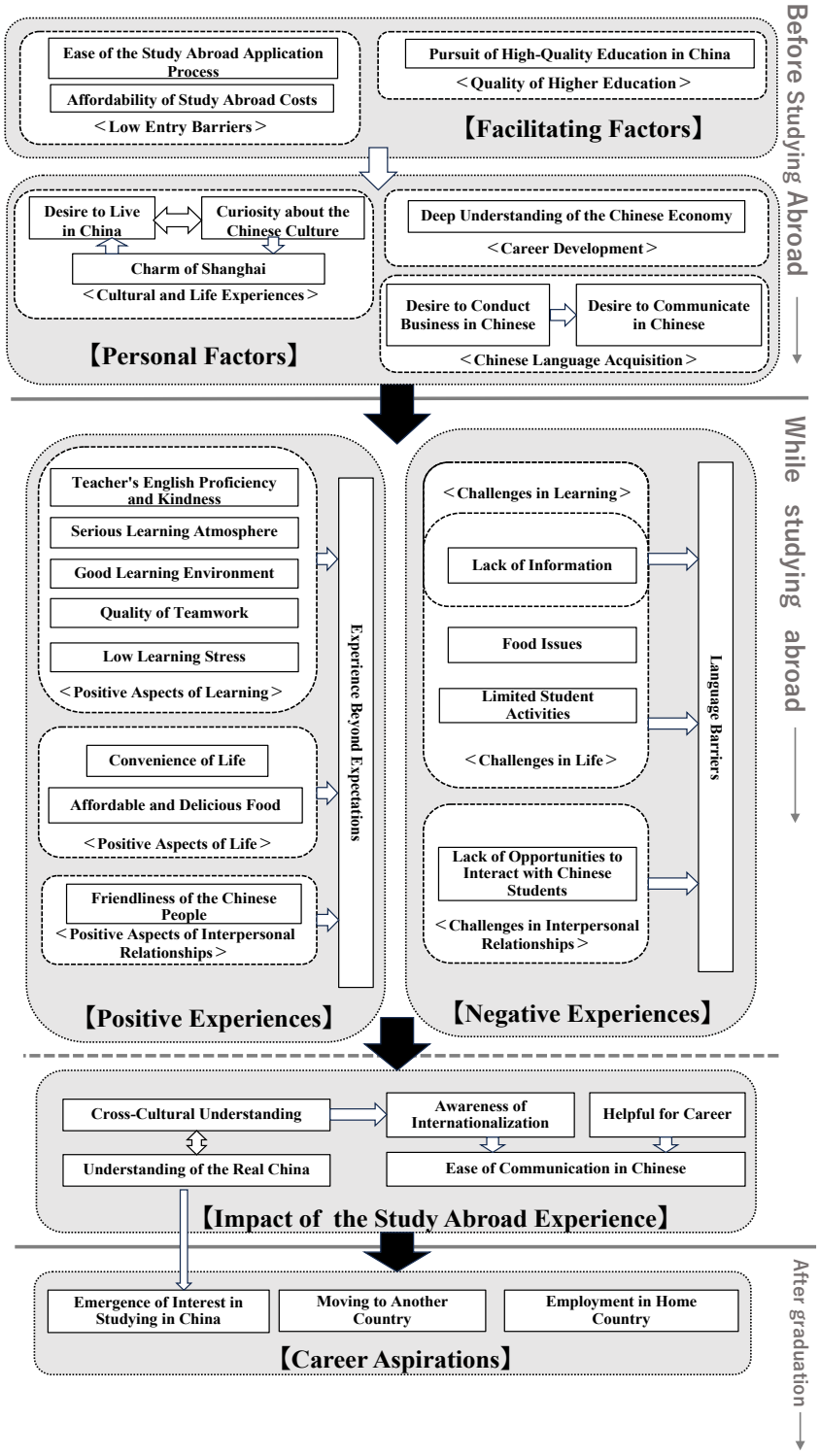


Figure 1. Model diagram of the study abroad process for non-degree international students

Meanwhile, another student emphasized the difficulty of communicating with Chinese students: "I find it difficult to interact with the Chinese students in class. It's because of the Chinese learning style—they are focused on listening to the teacher and taking notes..." (N2).

What kind of impact could these experiences have? The term 【Impact of the Study Abroad Experience】 refers to the skills and ways of thinking developed through experiences during the study abroad period. These impacts of the study abroad experience, whether positive or negative, contribute to deepening 『Cross-Cultural Understanding』 and 『Understanding of the Real China』. Additionally, the heightened 『Awareness of Internationalization』 and the 『Ease of Communication in Chinese』 led students to perceive their experiences as 『Helpful for Career』.

The impacts of the study abroad experience shape students' career aspirations after studying abroad. The term 【Career Aspirations】 refers to the type of career a student currently hopes to pursue after graduation. These aspirations are not those formed in their home country before studying abroad but rather reflect what they currently vision during their time abroad. However, regarding their career aspirations after graduation, non-degree international students—primarily exchange students and Chinese language trainees— typically did not consider staying back in China. Nevertheless, 【Positive Experiences】 during their study abroad journey and their 『Understanding of the Real China』 stimulated the 『Emergence of Interest in Studying』 in China. For example, one student aimed to study in North America after finishing the short-term program. However, if that was not feasible, she would like to study in China: "I want to go to a country like the United States or Canada... but if I can't do that, I plan to study medicine in China." (N4)

Undergraduate Degree-seeking International Students

Interviews with 12 undergraduate degree-seeking international students yielded 54 concepts, 13 subcategories, and 10 categories (see Figure 2).

Storyline

The study motivations of international undergraduate students are diverse, driven by not only 【Personal Factors】 and 【Facilitating Factors】 but also 【Socio-family Factors】. 【Socio-family factors】 refer to international students' social connections, such as family, friends, and acquaintances, as well as their sense of familiarity or affinity with China. Socio-family factors consist of 〈Social Connections and Sense of Affinity〉 and 『Family Decision-Making』. The former includes a sense of connection with China and the influence of acquaintances and others. In contrast, the latter refers to cases where the decision to study abroad was made by the family rather than the individual. This concept is only represented by students who have stayed in China for more than five years. Many started studying in China during high school, and in most cases, their parents made the decision rather than the students themselves. In addition, students' 【Personal Factors】 consist of two subcategories: 〈Chinese Language and Culture〉 and 〈Career Development〉. Studying the Chinese language is closely

connected to an interest in Chinese culture, and beyond that, people also want to expand future career options. These factors are further supported by 【Facilitating Factors】, which include economic considerations and the quality of higher education. In other words, the availability of scholarships and the presence of high-quality universities serve as pull factors that lead students to choose China as their study destination.

Furthermore, when studying abroad as an undergraduate student, it is necessary to select a university and a major. The term 【Factors in University Selection】 refers to the elements that influenced the decision of which university to attend for study abroad. When selecting a university for studying abroad, factors such as 『Convenience of Admission』, 『Reputation and Evaluation of the University』, 『Campus Environment』,『Preference for Specific Regions』, and 『Major』 play significant roles. In particular, students who aimed to learn Chinese tended to choose language-focused universities. The term 【Factors in Major Choice】pertains to the elements taken into account when selecting a primary field of study. Regarding the major selection, many students prioritized their 『Interest』 and the 『Future Potential』 of the major. However, some students face challenges such as 『Unclear Goals』 or find their 『Interest』 in a specific major restricted by scholarship policies. For example, one international student chose to study Chinese because he saw potential in it for the future. At the same time, he noted that the Confucius Institute, from which he received support, offered only two options for major: "I chose this major because I thought that it would have great prospects in Vietnam. An increasing number of people want to study Chinese, and my goal is to become a Chinese teacher….The Confucius Institute's scholarship program has limited majors. I originally wanted to choose International Relations, but the institute offered only two majors, one in English and Chinese, and another in Chinese only, so I chose Chinese." (U5)

During their study abroad experience, international undergraduate students had both 【Positive Experiences】 and 【Negative Experiences】. In terms of learning, students perceived 〈Positive Aspects of Learning〉, such as 『High Learning Awareness』, 『Support for International Students by Teachers』, 『High Quality of Teaching by All Faculty』, and 『Tolerant Evaluation Attitude toward International Students』. However, some students also experienced 〈Challenges in Learning〉, including 『Academic Gap Among Students』, 『Language Issues』, and 『Low Quality of Some Teachers』. These challenges contribute to 『Academic and Mental Stress』, with the overwhelming workload, exam pressure, and strict scholarship requirements increasing academic stress among students. For example, one student reported a negative experience related to the quality of the teaching staff: **"**Some teachers just read off the PPT slides without any interaction at all. Also, some of the teachers who teach English have a bit of an accent." (U10)

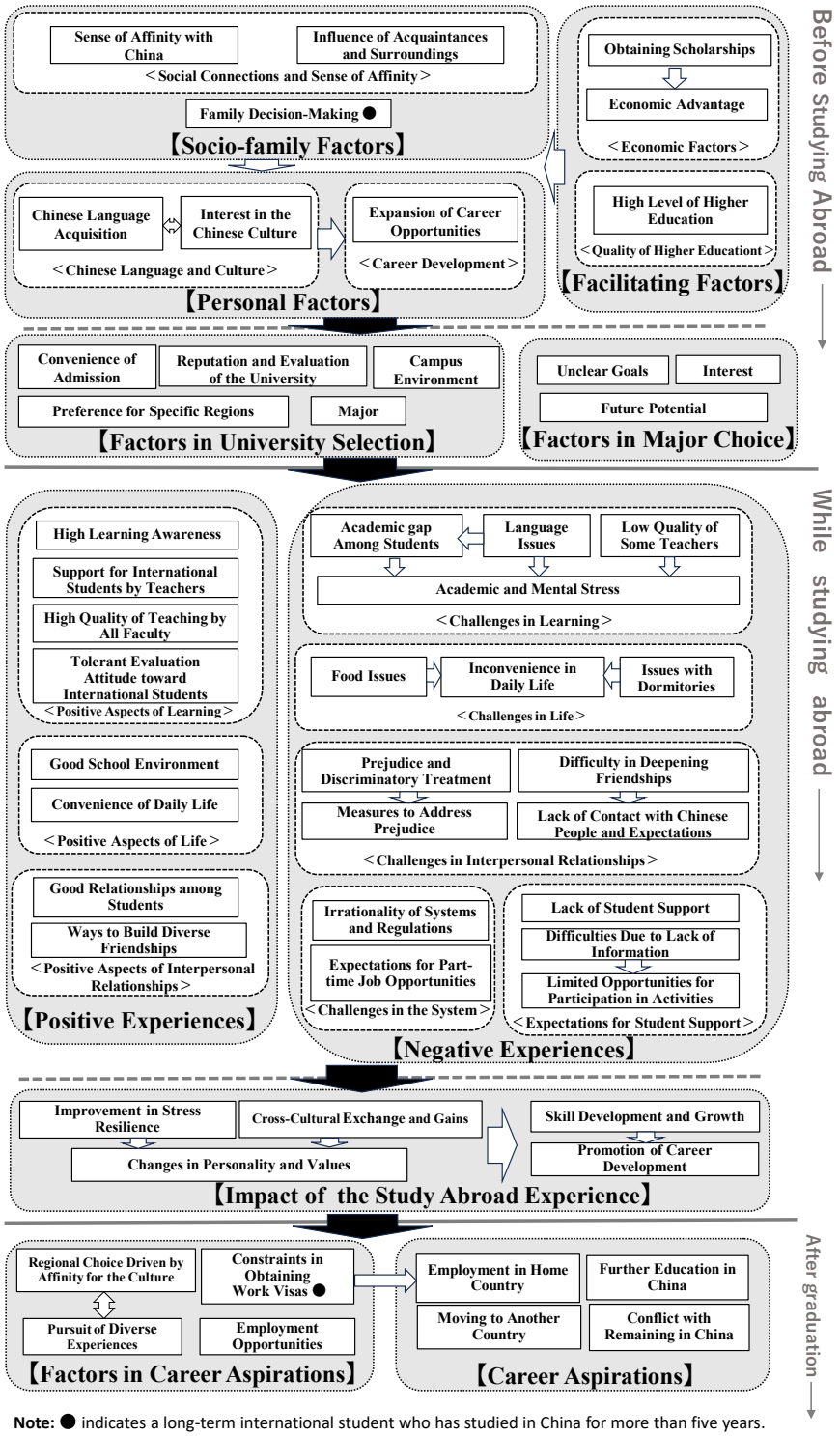
Regarding daily life, students appreciated the 〈Positive Aspects of Life〉, such as 『Good School Environment』 and 『Convenience of Daily Life』. International undergraduate students were not only satisfied with the comfortable university environment but also highly valued the convenience and

advanced nature of Shanghai. However, the 〈Challenges in Life〉 included 『Food Issues』 and 『Issues with Dormitories』, which led to 『Inconvenience in Daily Life』.

Regarding interpersonal relationships, students recognized the 〈Positive Aspects of Interpersonal Relationships〉, such as 『Good Relationships among Students』 and 『Ways to Build Diverse Friendships』. However, they also encountered 〈Challenges in Interpersonal Relationships〉, including 『Prejudice and Discriminatory Treatment』, 『Measures to Address Prejudice』, 『Difficulty in Deepening Friendships』, and 『Lack of Contact with Chinese People and Expectations』. One student, an overseas Chinese student, expressed a complaint about the prejudice they experienced from local Chinese students: "I feel that some Chinese students have a bias against overseas Chinese students. They think, 'Although they can speak Chinese and are almost the same as Chinese people, just because they belong to a foreign nationality, they can easily get into prestigious universities' Basically, they believe that we overseas Chinese students don't deserve to be part of the university." (U10). After experiencing various forms of prejudice and discriminatory treatment, international students found their own measures to address prejudice. Some students chose to report these issues to the school. For instance, one student stated: **"**Before the exam, the teacher conducts the course evaluation. Therefore, students share their opinions in a survey, but we are not required to write our names. That is why I wrote about my concerns regarding bias." (U6).

Beyond this, other aspects within 【Negative Experiences】 included 〈Challenges in the System〉 and 〈Expectations for Student Support〉. The issue of 『Irrationality of Systems and Regulations』 encompassed inefficiencies in administrative procedures at the international student office, ambiguity in accountability, dissatisfaction with embassy procedures and information provision, frustration with evaluation surveys, and dissatisfaction with scholarship requirements. Additionally, students manifested 『Expectations for Part-time Job Opportunities』, which were financial opportunities and a way to gain social experience and further improve their Chinese language proficiency. For example, one student complained about not being allowed to work part-time as an international student: "I hope that they allow us to do part-time jobs... It would be a good chance to make some money and also a valuable opportunity like an internship, to develop my abilities." (U4)

These 【Impacts of the Study Abroad Experience】 not only promoted 『Improvement in Stress Resilience』 but also led to 『Cross-Cultural Exchange and Gains』, ultimately resulting in 『Changes in Personality and Values』. Furthermore, 『Skill Development and Growth』 is believed to eventually contribute to 『Promotion of Career Development』. For example, one student stated that enduring intense competition gave him great confidence: "I really feel that competition in China is rather intense. So, if you can survive here, you can probably manage anywhere else in the world. At the time, it was really tough, and I felt like I couldn't do it anymore, but looking back now, I feel that it was a great experience." (U1)



Note: ● indicates a long-term international student who has studied in China for more than five years.

Figure 2. Model diagram of the study abroad process for undergraduate degree-seeking international students

Regarding their 【Career Aspirations】 after graduation, international undergraduate students tended to choose 『Further Education in China』, but many also chose 『Employment in Home Country』 due to practical factors, such as 『Constraints in Obtaining Work Visas』. The work visa issue was raised exclusively by long-term international students who had stayed in China for over five years. Many of them started studying in China in high school or earlier, and some were overseas Chinese students. Therefore, they strongly desired to work in China immediately after graduating from their undergraduate programs. However, they remained classified as international students, and regulations specify that holding only a bachelor's degree does not provide enough points to qualify for a work visa in China. Consequently, some were thinking about returning to their home countries for employment or exploring opportunities in other countries. For instance, one student stated: "At first, I was planning to work in China after graduation... but China's work visa has a points system. Foreigners like me with a bachelor's degree can get only 45 points. Since you need at least 60 points to work in China, I realized that I wouldn't be able to work here." (U1)

Additionally, some students experienced 『Conflict with Remaining in China』 due to 『Employment Opportunities』. Moreover, internal factors, such as cultural affinity and the 『Pursuit of Diverse Experiences』 could also drive students to move to other cities in China or pursue 『Moving to Another Country』.

Graduate Degree-seeking International Students

The interviews with 12 graduate students yielded 54 concepts, 13 subcategories, and 11 categories (see Figure 3).

Storyline

The study motivations of international graduate students consisted of 【Motivations for Studying Abroad at the Undergraduate Level】, 【Personal Factors】, 【Facilitating Factors】, and 【Social Factors】. The term 【Motivations for Studying Abroad at the Undergraduate Level】 specifically concerns the motivations of students who have already studied in China as international undergraduates. Some graduate students, particularly overseas Chinese students, have studied in China since their undergraduate years or even earlier. Their motivations are shaped by 『Influence of the Family and Background』 and 『Previous Experience in China』, which are linked to 〈Personal and Cultural Connections〉 within 【Social Factors】, forming the background for their decision to pursue graduate studies in China. For example, one student is an overseas Chinese student who described returning to China from New Zealand with their entire family for the family business as follows: "Around that time, in the early 2000s, my parents needed to make some adjustments in their business. Because of that, our whole family basically moved back to China." (M12). This return was a key factor in M12's choice to attend a university in China.

【Personal Factors】 are composed of two subcategories: 〈Chinese Language and Culture〉 and 〈Career Development〉. These motivations are further reinforced by 【Facilitating Factors】, which consist of two subcategories: 〈Quality of Higher Education〉 and 〈Institutions and Policies〉. First, 『High Level of Higher Education』 and 『Reputation and Evaluation of the University』 within the 〈Quality of Higher Education〉 function as pull factors that attract international graduate students to China. For example, a master's student in international economics and trade stated: "Chinese university degrees are perceived to hold greater prestige and value than those from Kazakhstan. For this reason, I chose to pursue my studies in China in order to obtain a high-quality education." (M7). Next, 〈Institutions and Policies〉 consisted of two key concepts: the 『Importance of Scholarships』 and 『Work Visa and Academic Qualifications Requirements』. One student mentioned, "I would not have come without a scholarship, as the cost is too high." (M3). Another student stated, "To get a work visa and work in China, you need to have at least a master's degree." (M12).

The 【Factors in University Selection】 for international graduate students are driven by 『University Reputation and Evaluation』 and 『Sense of Trust and Affinity』 along with 『Preference for Specific Regions』. These factors are key motivations for their university choices. Additionally, when selecting their major, considerations, such as the 『Future Potential』 of their field and their 『Interest』 lead to 『Continuous Learning and Advancement in Major』.

During their studies, international graduate students had both 【Positive Experiences】 and 【Negative Experiences】. These experiences encompassed multiple aspects, including academics, daily life, and interpersonal relationships, covering a wide range of factors, such as the quality and challenges of education, learning environment, language barriers, interactions with Chinese students, dietary habits, and student support. In terms of learning, students perceived the 〈Positive Aspects of Learning〉, such as 『Well-Equipped Learning Environment and Facilities』, 『High Expertise and Supportive Capacity of Teachers』, and 『Serious Attitude toward Learning』 as indicators of 『Superiority of the Education System』. However, some students also encountered 〈Challenges in Learning〉, including 『Rigorous Learning Environment』, 『Challenges in the Quality and Equity of Education』, and 『High Academic Difficulty』. The underlying cause of these challenges often stems from 『Language Barriers』. For instance, international students occasionally experienced a sense of inferiority. One student said, "I feel that I am not very competent because I cannot understand most of the lessons. In China, it is very difficult if your Chinese language skills are low." (M7)

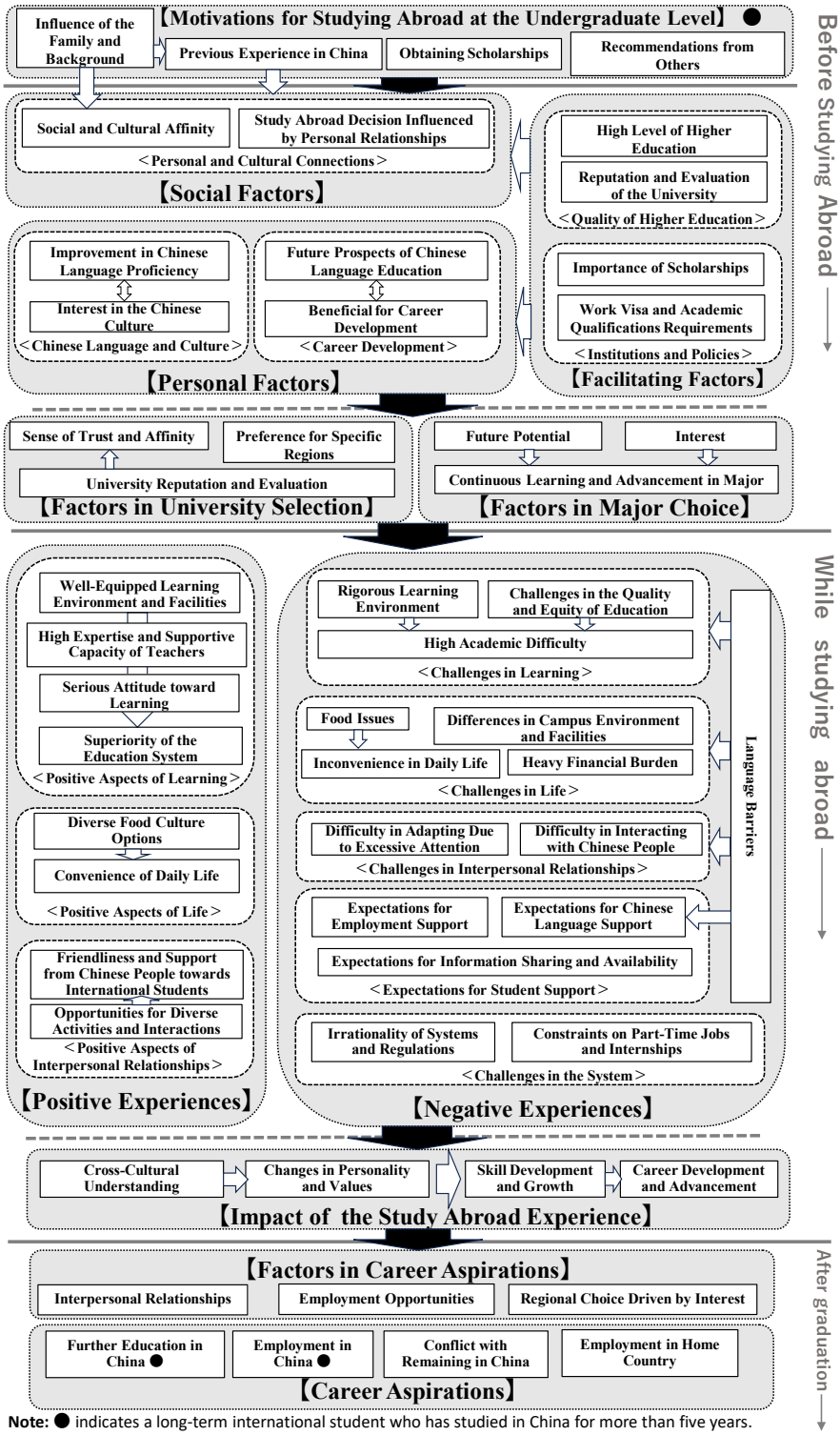
Additionally, regarding 『High Academic Difficulty』, students reported feeling stressed due to struggles in keeping up with the pace of classes and being evaluated by the same standards as Chinese students. One student mentioned, "It feels as though the school wants us to absorb a substantial amount of knowledge in a short time, but I don't really understand the purpose... Maybe I'm just not used to the fast pace in China." (M10). Another student said, "Since we're international students, I wish that they would slightly lower the expectations. The teachers hold us to the same standards as the Chinese students, so I sometimes feel a bit pressured." (M4)

Additionally, within 【Negative Experiences】, there were 〈Expectations for Student Support〉 and 〈Challenges in the System〉. Regarding student support, students had negative experiences with 『Expectations for Employment Support』, 『Expectations for Chinese Language Support』, and 『Expectations for Information Sharing and Availability』 and hoped for improvements in these areas. One student expressed dissatisfaction with the limited number of Chinese language courses available for graduate students: "At university, international students can opt for Chinese language classes for only one semester, but if they want to continue studying, they have to pay for it." (M9)

Additionally, within 〈Challenges in the System〉, issues, such as 『Irrationality of Systems and Regulations』 and 『Constraints on Part-Time Jobs and Internships』 were observed. Gaining internship experience is important for international students who wish to work in China. However, regarding the procedures for the "visa remark" process, graduate students pointed out that the lengthy visa remark process can lead to lost opportunities for internships, as one student explained: "The whole process, including the duration and procedures, can take about a month. If the company is in a rush to hire, we may lose the opportunity." (M12)

These 【Impacts of the Study Abroad Experience】 are believed to promote 『Cross-Cultural Understanding』 and lead to 『Changes in Personality and Values』. Additionally, 『Skill Development and Growth』, including expertise, Chinese language proficiency, and communication skills, are beneficial for 『Career Development and Advancement』.

Regarding post-graduation pathways, 【Factors in Career Aspirations】—such as 『Interpersonal Relationships』, 『Employment Opportunities』, and 『Regional Choice Driven by Interest』—shaped students' decisions. The identified 【Career Aspirations】 included 『Further Education in China』, 『Employment in China』, 『Conflict with Remaining in China』, and 『Employment in Home Country』. Notably, the first two pathways were exclusively mentioned by students who had resided in China for more than five years. Long-term international students had studied in China since their undergraduate years or earlier, and it was evident that they had a clear intention to either pursue a doctoral program after completing their master's degree or remain in China for employment. For example, one student said, "I moved back to China with my parents when I was in elementary school, so I plan to live here for the rest of my life….. I want to work in Shanghai after finishing my graduate studies." (M13). Another student mentioned, "Because the professors and classmates have been very welcoming, I feel a strong desire to stay in the country longer. I feel that the university as a whole is highly accepting of international students, and my academic advisor has been especially supportive and kind to me. That's why I'm considering pursuing a doctoral program." (M12)**.** M13 was a student from Argentina who had been in China for 13 years, while M12 was a student from New Zealand who had been living in China for 11 years.



Note: ● indicates a long-term international student who has studied in China for more than five years.

Figure 3. Model diagram of the study abroad process for graduate degree-seeking international students

As these examples show, long-term international students often have a clear plan to stay in China for their careers by the time they reach the master's level. In contrast, students who have only recently arrived in China often have less defined career aspirations.

Discussion

In the previous section, we looked at the study abroad processes for non-degree, undergraduate degree-seeking, and graduate degree-seeking international students separately. In this section, we compare the findings from these three groups in terms of motivations, experiences, and career aspirations. Tables 2.1 to 2.3 show a comparison of the three groups by listing categories, subcategories, and concepts, making it easy to see their similarities and differences. Here, we explore these similarities and differences, as well as the possible reasons behind them.

(1) Study Abroad Motivations

As shown in Table 2.1, six categories were generated regarding study abroad motivations: Personal Factors, Facilitating Factors, Social Factors, Factors in University Selection, Factors in Major Choice, and Motivations for Studying Abroad at the Undergraduate Level. While most of these factors have already been identified in previous studies using the push–pull model (Jiani, 2017; Mazzarol & Soutar, 2002), nearly all of them served as pull factors. This suggests that the three groups chose to study in China mainly because of the attractive qualities and opportunities offered by the host country, rather than because of push factors such as the lack of educational institutions or specific majors in their home countries.

The categories shared by all three groups were Personal Factors and Facilitating Factors. Specifically, Personal Factors included subcategories and concepts shared across the groups, focusing on interest in Chinese culture, the Chinese language, and career development. Similarly, Facilitating Factors were also shared by all three groups. The common subcategory was Quality of Higher Education. While Jiani (2017) identified China's rapid economic growth as a primary motivation for international students—suggesting that the quality of higher education was not a particularly significant factor—this study found that students across all groups regarded the quality of higher education as an important motivation. International students expressed trust in the high standards of China's higher education system, which acted as a strong pull factor.

Meanwhile, the subcategory in Facilitating Factors unique to non-degree international students was Low Entry Barriers. Ease of the Study Abroad Application Process and Affordability of Study Abroad Costs attract non-degree international students. This finding indicates that a streamlined application process and affordable costs are essential for attracting more non-degree international students. Instead,

scholarships were a common motivation among international undergraduate and graduate students, as they ensure financial stability for long-term study abroad. To attract more degree-seeking international students, more scholarships are needed. Additionally, the Work Visa and Academic Qualifications Requirements are unique to graduate students. As mentioned previously, a master's degree or higher is required to qualify for a work visa in China, making this a significant motivation for some students.

In the category Factors in University Selection, there were certain differences: undergraduate degree-seeking students were motivated by Convenience of Admission, Campus Environment, and Major. On the other hand, graduate degree-seeking students were motivated by Sense of Trust and Affinity. This suggests that they chose universities not only for their reputation and rankings, but also for trust-based motivations.

The category Motivations for Studying Abroad at the Undergraduate Level can be considered a newly observed factor. This category was identified only among graduate students who had studied in China for more than five years. Many of them pursued undergraduate studies in China based on their family's recommendation, and the experiences and relationships formed during that period influenced their decision to continue to graduate school.

These findings reveal that key motivations for studying in China include not only an interest in Chinese culture and language, but also the quality of Chinese higher education. In order to increase the number of international students in undergraduate and graduate programs, further enhancing the quality of higher education, along with expanding government-funded and university-specific scholarship programs, will likely serve as important pull factors.

(2) Study Abroad Experiences

Previous studies have conducted both quantitative and qualitative analyses on international students' learning experience, satisfaction, and acquired competencies (Ding, 2016; Luo & Sawamura, 2021; Shi, 2018; Weh et al., 2018). However, few studies have comparatively examined these experiences across the three distinct groups of non-degree, undergraduate degree-seeking, and graduate degree-seeking students. The following key points have been identified through this study (see Table 2.2).

Positive Experiences and its subcategories − Positive Aspects of Learning, Positive Aspects of Life, and Positive Aspects of Interpersonal Relationships − were common across all three groups. First, within the Positive Aspects of Learning, all groups acknowledged common factors, such as the quality of teachers and support for international students, a well-equipped learning environment, and a serious learning atmosphere and attitude. A concept unique to non-degree international students was Low Learning Stress. Regarding the Positive Aspects of Life, Convenience of Life was a common concept among all three groups. In the Positive Aspects of Interpersonal Relationships, all the three groups appreciated the friendliness of the Chinese.

Negative Experiences and its subcategories − Challenges in Learning, Challenges in Life, and Challenges in Interpersonal Relationships − were also common among all the three groups. However, differences existed at the conceptual level.

First, in Challenges in Learning, there was no common factor among all three groups. While non-degree international students experienced Lack of Information, it was not an issue for international undergraduate and graduate students who stayed there for longer periods. However, both international undergraduate and graduate students experienced low teacher quality and inconsistencies in education. While high teaching quality was recognized as a positive aspect, some students also experienced its negative aspects. Concepts unique to international undergraduate students included Academic Gap Among Students, Academic and Mental Stress, and Language Issues. Undergraduate students face significant disparities in academic abilities among their peers, and since they often take the same classes as those taken by the Chinese students, they encounter language difficulties, leading to mental and academic stress. Conversely, concepts unique to international graduate students included Rigorous Learning Environment and High Academic Difficulty. The high level of difficulty of graduate studies led students to perceive their academic environment as highly demanding.

In Challenges in Life, Food Issues was a shared challenge among all three groups. Additionally, international undergraduate and graduate students experienced Inconvenience in Daily Life due to issues, such as identification documents, dormitory life, and problems that arise due to long-term stays.

Within Challenges in Interpersonal Relationships, the common factor among all three groups was Lack of Contact with Chinese People and Expectations. Meanwhile, a challenge unique to international undergraduate students was Prejudice and Discriminatory Treatment and their corresponding Measures to Address Prejudice. Luo and Sawamura (2021) identified discrimination and prejudice as challenges faced by international students. However, our study found that such experiences were reported only among international undergraduate students when comparing the three groups. Interview data revealed that Prejudice and Discriminatory Treatment included three types: 1) Prejudice against specific regions and nationalities, 2) Prejudice against foreigners, and 3) Prejudice against overseas Chinese international students. International undergraduate students who experience such discrimination find it distressing but gradually develop coping strategies.

Furthermore, the subcategories of Negative Experiences common among only international undergraduate and graduate students were Challenges in the System and Expectations for Student Support. The concepts within Challenges in the System were common to both groups. However, some differences were observed: some international undergraduate students expressed Expectations for Part-Time Job Opportunities. For them, part-time jobs were not only for financial opportunities but also a way to better understand China and connect with local people. However, the Chinese government prohibits international students from working. Allowing part-time jobs could provide significant benefits and potentially attract more undergraduate students. Therefore, easing these restrictions may be

necessary. On the other hand, some international graduate students had Expectations for Employment Support since they were institutionally eligible for Employment in China.

These findings suggest that non-degree international students tend to report fewer negative experiences. This may be due to shorter stays and the primary focus on language training. Conversely, undergraduate degree-seeking students often face stress in competitive academic settings and, at times, encounter discrimination and prejudice. Given their younger age and limited life experience, it is likely that some students find it difficult to manage these challenges effectively. Therefore, it is important to improve support systems for international undergraduate students, especially in psychological counseling and daily life assistance. For international graduate students, additional improvements are needed to offer more employment support.

Finally, Impacts of the Study Abroad Experience was also a category common to all three groups (see Table2.3). The concepts common among all three groups were Cross-Cultural Understanding and Promotion of Career Development. Meanwhile, the concepts common among only undergraduate and international graduate students were Skill Development and Growth and Changes in Personality and Values, reflecting their growth through long-term study abroad experiences. Finally, a concept unique to international undergraduate students was Improvement in Stress Resilience. Studying abroad at a young age exposes students to various stressors; however, through these experiences, they develop greater resilience.

(3) Career Aspirations

Career Aspirations refers to the type of career a student currently hopes to pursue after graduation (see Table 2.3). These aspirations are not the ones formed in their home country before studying abroad, but rather reflect what they currently envision during their time abroad. The concepts common to all three groups were Further Education in China and Employment in Home Country. Moving to Another Country was a career aspiration common to international non-degree and undergraduate students, but it was not desired by international graduate students. Meanwhile, Conflict with Remaining in China was a concern shared only by international undergraduate and graduate students. A career path unique to international graduate students was Employment in China.

Common concepts shared by international undergraduate and graduate students within Factors in Career Aspirations included Employment Opportunities and Regional Choice Driven by Interest. Instead, A concept unique to international undergraduate students was the Constraints in Obtaining Work Visas. This study revealed the difficulties faced by undergraduate degree-seeking students in obtaining a work visa after graduation. Under China's current work visa scoring system, merely holding a bachelor's degree is insufficient to qualify for employment. International undergraduates need graduate studies or at least two years of work experience abroad. This issue was mainly voiced by long-

term students (over five years). Some considered returning home or seeking jobs elsewhere, which could lead to a significant loss for China. Therefore, the system needs further improvement.

Table 2.1: List of the Categories, Subcategories, and Concepts — Motivations

Non-degree International Students			Undergraduate Degree-seeking International Students			Graduate Degree-seeking International Students		
Category	**Subcategory**	**Concept**	**Category**	**Subcategory**	**Concept**	**Category**	**Subcategory**	**Concept**
Personal Factors	Cultural and Life Experiences	Desire to Live in China	Personal Factors	Chinese Language and Culture	Chinese Language Acquisition	Personal Factors	Chinese Language and Culture	Improvement in Chinese Language Proficiency
		Curiosity about the Chinese Culture			Interest in the Chinese Culture			Interest in the Chinese Culture
		Charm of Shanghai		Career Development	Expansion of Career Opportunities		Career Development	Future Prospects of Chinese Language Education
	Chinese Language Acquisition	Desire to Communicate in Chinese						Beneficial for Career Development
		Desire to Conduct Business in Chinese						
	Career Development	Deep Understanding of the Chinese Economy						
Facilitating Factors	Quality of Higher Education	Pursuit of High-Quality Education in China	Facilitating Factors	Quality of Higher Education	High Level of Higher Education	Facilitating Factors	Quality of Higher Education	Reputation and Evaluation of the University
	Low Entry Barriers	Affordability of Study Abroad Costs		Economic Factors	Obtaining Scholarships			High Standards of Higher Education
		Ease of the Study Abroad Application Process			Economic Advantage		Institutions and Policies	Importance of Scholarships
								Work Visa and Academic Qualifications Requirements
			Socio-family Factors	Social Connections and Sense of Affinity	Sense of Affinity with China	Social Factors	Personal and Cultural Connections	Social and Cultural Affinity
					Influence of Acquaintances and Surroundings			Study Abroad Decision Influenced by Personal Relationships
				—	Family Decision-Making			
			Factors in University Selection	—	Preference for Specific Regions	Factors in University Selection	—	Preference for Specific Regions
				—	Reputation and Evaluation of the University		—	University Reputation and Evaluation
				—	Major		—	Sense of Trust and Affinity
				—	Convenience of Admission			
				—	Campus Environment			
			Factors in Major Choice	—	Future Potential	Factors in Major Choice	—	Future Potential
				—	Interest		—	Interest
				—	Unclear Goals		—	Continuous Learning and Advancement in Major
						Motivations for Studying Abroad at the Undergraduate Level	—	Influence of the Family and Background
							—	Previous Experience in China
							—	Recommendations from Others
							—	Obtaining Scholarships

Table 2.2: List of the Categories, Subcategories, and Concepts — Experiences

Non-degree International Students			Undergraduate Degree-seeking International Students			Graduate Degree-seeking International Students		
Category	**Subcategory**	**Concept**	**Category**	**Subcategory**	**Concept**	**Category**	**Subcategory**	**Concept**
Positive Experiences	Positive Aspects of Learning	Teacher's English Proficiency and Kindness	Positive Experiences	Positive Aspects of Learning	High Quality of Teaching by All Faculty	Positive Experiences	Positive Aspects of Learning	High Expertise and Supportive Capacity of Teachers
		Good Learning Environment			Support for International Students by Teachers			Well-Equipped Learning Environment and Facilities
		Serious Learning Atmosphere			Tolerant Evaluation Attitude toward International Students			Serious Attitude toward Learning
		Quality of Teamwork			High Learning Awareness			Superiority of the Education System
		Low Learning Stress						
	Positive Aspects of Life	Convenience of Life		Positive Aspects of Life	Convenience of Daily Life		Positive Aspects of Life	Convenience of Daily Life
		Affordable and Delicious Food			Good School Environment			Diverse Food Culture Options
	Positive Aspects of Interpersonal Relationships	Friendliness of the Chinese People		Positive Aspects of Interpersonal Relationships	Good Relationships among Students		Positive Aspects of Interpersonal Relationships	Friendliness and Support from Chinese People towards International Students
	—	Experience Beyond Expectations			Ways to Build Diverse Friendships			Opportunities for Diverse Activities and Interactions
Negative Experiences	Challenges in Learning	Lack of Information	Negative Experiences	Challenges in Learning	Low Quality of Some Teachers	Negative Experiences	Challenges in Learning	Challenges in the Quality and Equity of Education
					Academic gap Among Students			High Academic Difficulty
					Academic and Mental Stress			Rigorous Learning Environment
					Language Issues			
	Challenges in Life	Food Issues		Challenges in Life	Food Issues		Challenges in Life	Food Issues
		Limited Student Activities			Inconvenience in Daily Life			Inconvenience in Daily Life
					Issues with Dormitories			Heavy Financial Burden
								Differences in Campus Environment and Facilities
	Challenges in Interpersonal Relationships	Lack of Opportunities to Interact with Chinese Students		Challenges in Interpersonal Relationships	Lack of Contact with Chinese People and Expectations		Challenges in Interpersonal Relationships	Difficulty in Interacting with Chinese People
	—	Language Barriers			Difficulty in Deepening Friendships			Difficulty in Adapting Due to Excessive Attention
					Prejudice and Discriminatory Treatment			
					Measures to Address Prejudice			
				Challenges in the System	Irrationality of Systems and Regulations		Challenges in the System	Irrationality of Systems and Regulations
					Expectations for Part-Time Job Opportunities			Constraints on Part-Time Jobs and Internships
				Expectations for Student Support	Lack of Student Support		Expectations for Student Support	Expectations for Chinese Language Support
					Difficulties Due to Lack of Information			Expectations for Information Sharing and Availability
					Limited Opportunities for Participation in Activities			Expectations for Employment Support
							—	Language Barriers

Table 2.3: List of the Categories, Subcategories, and Concepts — Impacts of Experiences and Career Aspirations

Non-degree International Students			Undergraduate Degree-seeking International Students			Graduate Degree-seeking International Students		
Category	**Subcategory**	**Concept**	**Category**	**Subcategory**	**Concept**	**Category**	**Subcategory**	**Concept**
Impact of the Study Abroad Experience	—	Cross-Cultural Understanding	Impact of the Study Abroad Experience	—	Cross-Cultural Exchange and Gains	Impact of the Study Abroad Experience	—	Cross-Cultural Understanding
	—	Helpful for Career		—	Promotion of Career Development		—	Career Development and Advancement
	—	Ease of Communication in Chinese		—	Skill Development and Growth		—	Skill Development and Growth
	—	Understanding of the Real China		—	Changes in Personality and Values		—	Changes in Personality and Values
	—	Awareness of Internationalization		—	Improvement in Stress Resilience			
Career Aspirations	—	Emergence of Interest in Studying in	Career Aspirations	—	Further Education in China	Career Aspirations	—	Further Education in China
	—	Employment in Home Country		—	Employment in Home Country		—	Employment in Home Country
	—	Moving to Another Country		—	Moving to Another Country		—	Conflict with Remaining in China
				—	Conflict with Remaining in China		—	Employment in China
			Factors in Career Aspirations	—	Employment Opportunities	Factors in Career Aspirations	—	Employment Opportunities
				—	Regional Choice Driven by Affinity for the Culture		—	Regional Choice Driven by Interest
				—	Pursuit of Diverse Experiences		—	Interpersonal Relationships
				—	Constraints in Obtaining Work Visas			

Conclusion

In this study, we divided 29 international students into three groups: that is non-degree students (five participants), undergraduate degree-seeking students (12 participants), and graduate degree-seeking students (12 participants), and analyzed the data using the modified grounded theory approach (M-GTA). The analysis proceeded by generating concepts using analysis worksheets, categorizing them, creating model diagrams, and writing the storylines. We also examined the similarities and differences in study motivations, experiences, and career aspirations among the three groups. By gathering data through qualitative research that covers the entire process from study motivation to career aspirations, this study aimed to clarify the characteristics of the study abroad journey for international students in China. While many categories and subcategories generated in the analysis overlapped across the groups, at the level of concepts, many were unique to each degree level. We identified factors that emerged corresponding to the students' developmental stage and educational level, as well as factors arising from China-specific institutional constraints. We found that the study abroad process is highly complex, and study motivations are shaped by a mix of personal, social, and facilitating factors. During their study abroad experience, students faced both positive and negative aspects in academics, daily life, and interpersonal domains. As their intercultural understanding and personal values evolved, they reflected on their future careers and developed their career aspirations. These dynamics varied among the three groups examined in this study. Previous studies often either overlooked students' degree levels in their analyses or only examined specific degree levels in their samples, leading to unclear distinctions among degree levels. This study makes an original contribution to the understanding of the similarities and differences in the study abroad process across various degree levels.

This study has certain limitations. It was restricted to two universities in Shanghai, which may introduce regional biases. Also, while the study examined students' career aspirations, no follow-up was conducted after graduation. Future research should include more cities to compare the experiences of international students in different regions and consider comparing international students in China with those in other countries.

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Intention to Adopt Distance Education Mediated by Satisfaction: Structural equation modelling in Ecuadorian universities

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Abstract. This study analysed the intention to adopt distance education in Ecuadorian universities, using student satisfaction during the Covid-19 pandemic as a mediating variable. A methodological design based on structural equation modelling was implemented using a sample of 1,317 students from three public universities in the highland's region of Ecuador. Variables such as satisfaction and its constructs of teacher support and peer collaboration were evaluated, as well as the internal dimensions of the UTAUT model, which include performance expectancy, effort expectancy, social influence and facilitating conditions, in addition to moderating variables such as age, gender, university, programme and grade point average. The results show that satisfaction plays a significant mediating role in the intention to use distance learning. It is concluded that positive online learning experiences, influenced by institutional support and student collaboration, increase the intention to adopt e-learning. In addition, moderating variables such as gender and age were identified as affecting perceptions of distance learning. This analysis provides higher education institutions with valuable information to adjust their educational offerings, focusing on increasing student satisfaction and improving distance learning conditions.

Keywords: e-learning, UTAUT, structural equation modelling, satisfaction, behavioural intention to use

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Introduction

The Covid-19 pandemic abruptly changed the teaching processes at all levels of the education system from a mostly face-to-face mode to a distance mode, synchronous, although in some cases given the technological limitations and internet access, asynchronous. As part of distance education, the use of technological tools, platforms and systems allowed for the continuity of training and the possibility of assessing satisfaction with this modality and the possible change of preferences towards e-learning.

Although during the confinement there were no other possibilities to maintain the educational process, after the return to face-to-face learning, it has been possible to analyse whether students, especially in higher education, given their experience during the pandemic, have modified their intention to use this mode of study. Neoclassical economic theory suggests, when analysing individuals' preferences, that if both alternatives are available and face-to-face education has already been chosen, the choice will not change and the student will continue to prefer this mode (Hernández-Medina et al., 2024a; Díaz-Muñoz et al., 2024).

While under the assumptions of rationality and compliance with consumer preference axioms this is valid and necessary, bounded rationality proposes that experiences and biases can condition and modify satisficing optimisation decisions (Kahneman & Tversky, 1979). Thus, if the learner modifies his or her choice because of the experiences and emotions experienced in the health emergency, it is not possible to satisfy the choice axioms and assumptions of rationality (Hernández-Medina et al., 2024a).

That is why it is not possible to consider the student's choice or preferences solely from the perspective of rationality. Rather, the modification of their preferences in accordance not only with behavioural economics, but also with social learning theory or planned behaviour theory, is the result of the positive or negative consequences of past choices, the beliefs generated from them, or environmental pressures.

In any case, changes in student preferences or the intention to opt for the distance mode would allow higher education institutions (HEIs) in Ecuador to adjust the educational offer, adapting not only to student preferences, but also to reduce costs and expand the offer, which is currently severely limited by the scarcity of physical infrastructure. The possibility of distance programmes represents a viable option for access to the higher education system, as Ecuador has a high proportion of the population that resides in areas distant from educational centres, which requires mobility to other cities. This characteristic generates high travel, housing and living costs for both the student and his or her family, further limiting access and permanence (Hernández-Medina & Díaz, 2024).

Based on the experience during the health emergency, this study starts with the analysis of satisfaction with the distance learning modality, considering dimensions such as teacher support and peer collaboration (Walker & Fraser, 2005; Ferrer-Cascales et al., 2011; Fernández-Pascual et al., 2013), factors that have presented the greatest limitations during confinement. The study was conducted with

students from three public universities in the Ecuadorian highland's region, in the provinces of Cotopaxi, Chimborazo and Tungurahua, south of the capital, characterised by a significant student population from other areas of the country and a medium-low socio-economic level.

This dimension of satisfaction can be considered as a mediator of the intention to use distance education, in conjunction with other dimensions proposed by the UTAUT (Unified Theory of Acceptance and Use of Technology) model, such as effort expectancy, performance expectancy, facilitating conditions and social influence (Venkatesh et al., 2003; Madera et al., 2012; Chavoshi & Hamidi, 2019; Almaiah et al., 2019; Patil & Undale, 2023), as well as other sociodemographic variables such as gender, age and experience (Ferrer-Cascales et al., 2011; Almaiah et al., 2019). In particular, the literature does not show clear conclusions on the effect of age, GPA, area of residence and gender on the uptake of distance education.

Based on the results obtained from the application of the instrument to 1,317 students from the three HEIs, a structural equation model is estimated, given the presence of exogenous latent variables; this model allows us to test the hypotheses of direct relationship between: 1) satisfaction and the dimensions of teacher support and peer collaboration; 2) satisfaction, as a mediating variable, and behavioural intention of use (endogenous latent variable); 3) behavioural intention of use and the dimensions of functioning expectancy, social influences, facilitating conditions and inverse with effort expectancy and, 4) the effect of students' moderating variables on behavioural intention of use.

Literature Review

Satisfaction with distance education in this context is considered as the student's perception of the quality of education in this modality, which is part of the evaluation processes of higher education (Fernández-Pascual et al., 2013). This perception is influenced by institutional factors, the role of the teacher in the process, and the minimisation of transactional distance. To this, we must add the availability of equipment and internet, as well as the individual characteristics of the student, their emotions, and their state of mind during lockdown.

In the first case, HEIs with experience and better capacity for distance education achieved higher levels of satisfaction among their students and teachers (Baber, 2020; Karadağ et al., 2021), associated with the quality of the technical system, information, service and support system as stated by Al-Fraihat et al. (2020).

In the second case, teaching support is conceived in distance education as the possibility of accompaniment, willingness to clarify doubts, availability and interaction on the platforms used, in addition to accessibility and flexibility (Bordios et al., 2022; Åkerfeldt et al., 2023; Sparboe-Nilsen et al., 2024). The role of the teacher was relevant in decreasing transactional distance, not only by motivating the learner and actively interacting to facilitate the process, but also by encouraging collaboration and a sense of community among the learners themselves (Tabatabaeichehr et al., 2022;

Arslan & Yilmaz, 2022). In the third, online education requires technological tools that shorten the distance between teachers and students, often referred to as transactional distance, while guaranteeing the quality of content, access to platforms, compatibility and ease of use (Weidlich & Bastiaens, 2018, Miguel, 2020; Tejedor et al., 2021).

The approach to this third factor is developed in the literature through models such as TAM (Technology Acceptance Model) and UTAUT (Unified Theory of Acceptance and Use of Technology) have shown that satisfaction is a key element in the adoption of technologies, since in these models when students perceive that a distance education platform is useful and easy to use, their level of satisfaction increases, which strengthens their intention to continue using it.

Specifically, the main objective of the TAM was to explain the factors that influence the adoption and effective use of a technology, identifying the variables that determine the acceptance of a technology by users (Davis, 1979), based on the Theory of Reasoned Action (Fishbein & Ajzen, 1975), for which it considers two dimensions or constructs that are given by the perception of usefulness (Perceived Usefulness) or belief that the technology is useful to achieve a specific goal, such as improving productivity or simplifying a process; and Perceived Ease of Use, which implies that the easier a technology is to use, the more likely it is that users will adopt it (Paublini-Hernández & Morales-La Paz, 2025).

Some studies have argued that the TAM model oversimplifies the technology adoption process by focusing primarily on individual perceptions and not sufficiently considering broader organisational, cultural or social factors. For example, Bagozzi (2007) pointed out that the TAM leaves out more complex social considerations and does not adequately address how users integrate technology into their daily lives. In addition, most criticisms focus on the fact that the TAM does not account for long-term usage behaviours and does not consider users' previous experience with similar technologies, which is vital for the analysis of post-pandemic behaviour.

These elements have been captured by the UTAUT model by proposing that intention to use a technology and actual use are determined by four key factors: 1) performance expectancy which refers to the degree to which an individual believes that the use of a technology will improve their performance at work or on a specific task; 2) effort expectancy which represents the degree of ease associated with the use of the technology; 3) social influence which measures the degree to which an individual believes that the use of a technology will improve their performance at work or on a specific task; 4) social influence which measures the degree to which an individual believes that the use of a technology will improve their performance at work or on a specific task; 3) social influence which measures the degree to which an individual perceives that people important to them believe they should use the new technology and; 4) facilitating conditions which refers to the degree to which an individual perceives that the resources and organisational support necessary to use a technology are in place (Venkatesh et al. , 2003; El-Masri & Tarhini, 2017; Vanitha & Alathur, 2021; Zhang et al., 2020).

The importance of these dimensions is proposed by authors such as García & Pascucci (2022),

Contreras et al., (2021), Matarirano et al. (2021), Al-Mawee et al. (2021) and Sotelo et al. (2022), who identify preferences for remaining in face-to-face education, derived from low satisfaction with teacher support, interactions with peers, technological tools, internet access and the quality of content and materials (Chanto, 2021).

The UTAUT also includes four moderating variables that affect the relationship between the main constructs and intention to use the technology: age, gender, experience and voluntariness (Vanitha & Alathur, 2020; Jiang et al. 2022; Lembani et al., 2019). This is fundamental to understanding behaviour in terms of preferences based on experience during pandemics and the main reason for its use in most studies in recent years (Hernández-Medina et al., 2024a).

Fourthly, and no less importantly, individual factors must be considered, as students' socio-demographic and economic characteristics, as well as their adaptability and resilience, were determinants of satisfaction and learning (Edel, 2003; Dumas, 2011). Studies such as those by Al-Balas et al. (2020), Fawaz and Samaha (2021), Lee et al. (2021), Bacci et al. (2022), Soldatova and Rasskazova (2022) highlight the importance of considering psychological factors, previous experience in e-learning, facilitating conditions linked to a good study environment, stable internet connection, and adequate devices in student satisfaction, which are critical aspects in the pandemic era, especially in rural areas (Zhou et al., 2022; Bordios et al., 2022; Da Silva-Pontes et al., 2024).

Specifically, within sociodemographic characteristics, studies show that younger users tend to be more influenced by effort expectations and performance expectations, while older users are more affected by facilitating conditions (Krasodomska & Zarzycka, 2022). Additionally, the less positive perception of distance learning compared to face-to-face education may be determined by the academic level and the type of faculty to which the student belongs; graduate students, for the most part, had a more positive view on the flexibility offered by distance learning and reported feeling more satisfied with access to online resources and contact with professors. In contrast, undergraduate students, especially first-year students, reported a more negative experience due to less interaction with peers and greater isolation (Al-Mawee et al., 2021).

In terms of gender, research suggests that women, in general, value effort expectancy and social influence more highly when adopting a technology, while males tend to be more motivated by performance expectancy. Zhang et al. (2020), for their part, identify a greater effect of technological infrastructure and social influence on male students; while other research even corroborates the presence of statistically significant differences between the intention to adopt distance education between men and women, being higher in males (Ramírez-Correa et al., 2015). Although the literature also shows other studies such as those by Aksoy (2021) that fail to identify statistically significant differences according to age, academic level or duration of daily internet use, which is moderated by the environment and personal characteristics of the student.

In the case of Ecuador, the adoption of distance education is conditioned to a greater extent by access to resources and institutional support, such that improving both variables are key to reducing

existing gaps. Therefore, although gender and age may influence the intention to adopt under certain conditions, they have a less clear effect (Asanov et al., 2020; Hernández & Díaz, 2024).

With regard to area of residence, while there is no consensus in the literature on the effect of living in rural areas, experience in pandemics indicates that although there are limitations such as internet access (Lembani et al., 2019; Syahruddin et al., 2021), e-learning contributes to decreasing social distancing and reducing rural-urban inequalities, so that the effect on satisfaction and intention to opt for the mode depends on the magnitude of the advantages and disadvantages (Wang, 2022).

All these factors condition the student's satisfaction or perception of quality, which can be conceived as a mediating and predictive variable of the intention to adopt this modality, as it acts as an intermediary between the dimensions presented and this willingness to use it (Bervell et al., 2024; Masrani et al., 2023; Özgen and Reyhan, 2020), so that the greater the satisfaction with the online learning experience, the more likely the student is to develop a positive attitude towards the modality.

This effect of experience can be addressed from the perspective of behavioural economics, in the sense that previous experience in virtual environments can serve as a 'reference point' in the decision-making process of university students regarding whether to continue or adopt distance learning. Students compare new alternatives not in absolute terms, but in relation to reference points established by their past experiences (Kahneman & Tversky, 1979). Students with favourable experiences in online courses will tend to perceive future virtual educational opportunities as less risky or uncertain, given that their point of comparison is positive, reducing the perception of 'loss' or negative shock if the virtual environment meets (or exceeds) their initial expectations (Pineda-Martínez et al., 2023).

On the other hand, behavioural economics predicts that if the previous experience was negative, the student may experience a loss aversion bias, avoid distance learning or classify it as less attractive, even in the face of objective improvements in technology or design (Pineda-Martínez et al., 2023; Amaya-Amaya & Cantú-Cervantes, 2024).

The phenomenon of anchoring, another central contribution of behavioural economics, indicates that individuals tend to use initial information as a basis for judging new situations, whereby a student who declares high familiarity with e-learning is likely to feel more 'anchored' to high standards and will demand more from the new digital experience, but if that standard is met or exceeded, the decision to opt for distance learning will be more favourable (Pineda-Martínez et al., 2023).

In addition, there are also studies that have used a qualitative approach to address the phenomenon of the intention to adopt distance learning as a mode of study in universities. The results show positive and negative experiences linked to distance learning during the pandemic. The positive aspects were linked to the flexibility and continuity of the learning process, as well as the possibility of developing self-learning and strengthening digital skills and the use of technological tools (Moreno and Chiecher, 2022; López-Luna and Cruz-Cruz, 2022); to which are added positive changes in study habits and more time for the training process. Despite this, the negative aspects were linked to the possibility of understanding the content, lack of practical experience, lower quality of interactions with both peers and

teachers, as well as socioeconomic conditions, uncertainty, confusion among teachers and students, and poor preparation or availability of platforms in educational institutions (Moreno and Chiecher, 2022; Fiengo et al., 2021).

Methodology

Four hypotheses were proposed for the study: the dimensions of teacher support and peer collaboration have a positive effect on satisfaction (H1); satisfaction, as a mediating variable, has a direct relationship with the behavioural intention of use (H2); the behavioural intention of use rises as the dimensions of expectation of functioning, social influences, facilitating conditions improve and decreases with the expectation of effort (H3); and the moderating variables have an effect on the behavioural intention of use (H4).

The starting point was the collection of information on the constructs of satisfaction, intention to use and moderating variables in students from three public universities in the highlands region of Ecuador: Universidad Nacional de Chimborazo (UNACH), Universidad Técnica de Ambato (UTA) and Universidad Técnica de Cotopaxi (UTC), through a total sample of 1,317 students from the three HEIs.

The instrument considered three sections, the first relating to the moderating variables: gender, age, marital status, career, current semester, area of residence, grade point average and distance education experience; the second on satisfaction (SAT) for which the DELES Questionnaire (the distance education learning environments survey) was used which assesses the construct or dimension of satisfaction, as well as the dimensions of teacher support (TS) and student interaction and collaboration (COL), measured on a Likert-type scale from 1 to 5, where 1 indicates 'never' and 5 'always' (Walker & Fraser, 2005); the third on the UTAUT model to assess intention to use (BIU-endogenous latent variable) and the internal dimensions of performance expectancy (PE), effort expectancy (EE), social influence (SI) and facilitating conditions (FC), measured on a Likert-type scale from 1 to 5, where 1 indicates 'strongly disagree' and 5 'strongly agree'. Satisfaction is made up of 8 items as is teacher support, while student collaboration considered 6 items.

With respect to the behavioural construct, intention to use comprises 4 items for this dimension, as well as for facilitating conditions, expectancy of functioning and social influences, while 3 items were considered for expectancy of effort.

From the information collected, the reliability analysis of the data was carried out considering Cronbach's Alpha for each dimension, whose results show the internal consistency of the data in each construct, as shown in Table 1, since all the values are above the minimum required value reported in the literature of 0.70.

Table 1. Reliability analysis of the different constructs

Constructs	Cronbach's Alpha
Satisfaction	0.96
Teacher support	0.91
Student collaboration	0.89
Behavioural intention to use	0.89
Expectation of performance	0.90
Expectation of effort	0.86
Facilitating conditions	0.84
Social influence	0.85

Two types of factor analysis can be distinguished: exploratory and confirmatory, which are fundamental for the validation of measurement instruments and for the estimation of relationships between variables. Principal component's analysis made it possible to reduce dimensionality by grouping items that are correlated with each other. Further factor analysis and rotation by the varimax technique was applied to facilitate interpretation, maximizing the loading of the items in some factors and minimizing it in others. In addition, the correlation between the approaches was tested by means of Bartlett's test of sphericity, rejecting the null hypothesis that proposes the non-existence of such correlation. This approach was completed with the Kaiser-Meyer and Olkin test (KMO), which allows corroborating whether the sample can be grouped into factors through a quotient between observed and partial correlations. In the case of the KMO test, the values for each of the survey approaches must be greater than 0.60.

Considering the results of the exploratory factor analysis, the measurement model or confirmatory factor analysis was constructed, which shows the covariance relationships between the factors, seeking to confirm whether the data fit a pre-established theoretical model (Lepera, 2021; Hernández-Medina et al., 2024b). Goodness-of-fit indices were used for validation, as well as discriminant and convergent analysis of the factors. The goodness-of-fit indices considered are the Chi-square, the RMSEA (Root Mean Square Error of Approximation), the CFI (Comparative Fit Index) and the TLI (Tucker-Lewis Index), detailed in Table 2 (Ruiz et al., 2010; Lomax, 2018).

Table 2. Confirmatory factor analysis goodness-of-fit indices

Indexes	Definition	Acceptable values
Chi-square	Indicates how "Good" the model is. We seek to accept the null hypothesis that indicates that the fit is adequate.	Accept Ho or values less than 3 (division of value by degrees of freedom)
Root mean square root of the approximate error (RMSEA)	Difference between the value of the chi-square statistic and its degrees of freedom.	Values less than 0.08
Standardized root mean square residual (SRMR)	Root mean square of the residuals with respect to the correlation matrix.	Values less than 0.08
Comparative fit index (CFI)	Ratio between the differences of the chi-square value and the degrees of freedom of the base model and the final model	Value greater than 0.90
Tucker-Lewis Index (TLI)	Ratio between the base model and the final model in small samples	Value greater than 0.90

Note: Taken from Lepera (2021).

Discriminant and convergent validity are fundamental to guarantee that an instrument really measures what it is intended to measure and that its dimensions or factors are distinct from each other. Convergent validity refers to the extent to which two or more items intended to measure the same construct are correlated with each other, which is guaranteed by considering higher factor loadings and an average variance extracted (AVE) greater than 0.50. AVE is a measure that indicates the amount of variance captured by a construct relative to the amount of variance due to measurement error.

On the other hand, discriminant validity refers to the extent to which an item does not correlate with other items measuring different constructs. This validity was analysed through the Fornell-Larcker criterion which indicates that a construct has discriminant validity if the square root of its AVE is greater than the correlation between that construct and any other construct in the model.

Once the measurement model and its path diagram were obtained, the structural equation model was estimated. This involved the estimation of equations representing the relationships between latent and observed variables (Lomax, 2018). As such, the model estimated the relationships between the endogenous latent variable (behavioural intention to use) with the exogenous latent variables associated with satisfaction and the determinants of the UTAUT model, as well as with the exogenous moderating variables.

The model defined as the structural model was validated on the basis of the goodness-of-fit indices established in Table 2, enabling estimation of the total effects of the exogenous, observed or latent variables on the endogenous latent variable, as well as the direct effects of each item on the factor that groups them together and the indirect effects of the exogenous variables (observed or latent) on the items of each of the factors of the intention to use (endogenous latent variable).

Results

Qualitative Approach

As part of the research, in-depth interviews were conducted with teachers and students to characterise their experiences of distance learning during the pandemic, asking them to indicate the positive and negative aspects of the experience. For students, the most frequently mentioned positive aspects were related to the possibility of continuing their education, flexible schedules and academic workload, access to materials and videos that allowed them to review content they did not fully understand, and the existence of platforms or tools that facilitated the process. The negative aspects were related to the lack of interaction between classmates and teachers, teachers who were not well trained in virtual teaching, lectures, uncertainty and isolation, lack of motivation, difficulty in understanding quantitative subjects, absence of practical work or fieldwork, and limitations in internet access.

For their part, teachers reported work overload, lack of tools for teaching distance classes, poor preparation in digital platforms or tools, difficulties in accessing the internet, limitations in maintaining student attention, little institutional support, lack of adequate equipment or technology (technology gap) and limited interaction with students. However, they also indicated greater flexibility in working from home, automation of assessments and motivation to strengthen digital skills.

Sample Characterization

The sample consisted of 1,317 students, 390 from the Technical University of Cotopaxi, 452 from the Technical University of Ambato and 475 from the National University of Chimborazo. The mean age of the sample was 21.4 years, with women representing a higher proportion (57.4%), as well as those who were single (95.1%) and those who reported not having children (90.9%). It is important to note that 37.4% reside in rural areas, which could limit Internet access and thus negatively impact satisfaction and intention to use e-learning. As for the average grades reported by the students, 50.3% are between 7 and 8 points, the scale in Ecuador being from 1 to 10 points, requiring 7 points for the approval of each of the subjects.

Regarding satisfaction and its constructs, teaching support and collaboration among peers, statistically significant differences by university are evident, being higher in UNACH than in the rest of the HEIs; indeed, in UTA and UTC satisfaction is below the average of the scale. This may be due to the technological infrastructure of the universities and previous experience in e-learning (Table 3).

Table 3. Differences by universities of the analysed constructs

	UNACH	UTA	UTC	Difference
Satisfaction	3.5	2.8	2.8	***
Teacher support	3.8	3.6	3.4	***
Student collaboration	3.9	3.6	3.7	***
Behavioural intention to use	3.5	2.9	3.0	***
Expectation of performance	3.6	3.1	3.1	***
Expectation of effort	3.9	3.7	3.5	***
Facilitating conditions	3.8	3.4	3.6	***
Social influence	3.8	3.6	3.5	***

Note: The hypothesis test for differences in means was estimated with the Kruskal Wallis test since none of the variables are normally distributed. Significance at 1% (***), 5% (**) and 10% (*)

With regard to the intention to use, something similar occurs, the IES with the best evaluation is the UNACH in all constructs, although in all cases the best results are obtained in the facilitating conditions and social influences, as a result of the fact that the three institutions, as a strategy to mitigate the impact of the change of modality, lent devices and provided options for the connection to the Internet, especially in rural areas and vulnerable students. Specifically, the intention of use at UTA and UTC was below the average of the scale, showing that face-to-face education is preferred.

Exploratory and Confirmatory Factor Analysis

The exploratory factor analysis allowed validation of the proposed theoretical constructs, identifying one factor for each of the dimensions: satisfaction, teacher support and peer collaboration. In all cases, the null hypothesis of Barlett's test of sphericity was rejected, which implies that the existing correlation between the items validates their grouping. Additionally, the factor loadings of the items in each construct exceeded the value of 0.50 and the KMO index values were above 0.90, indicating that the factor analysis fits the data.

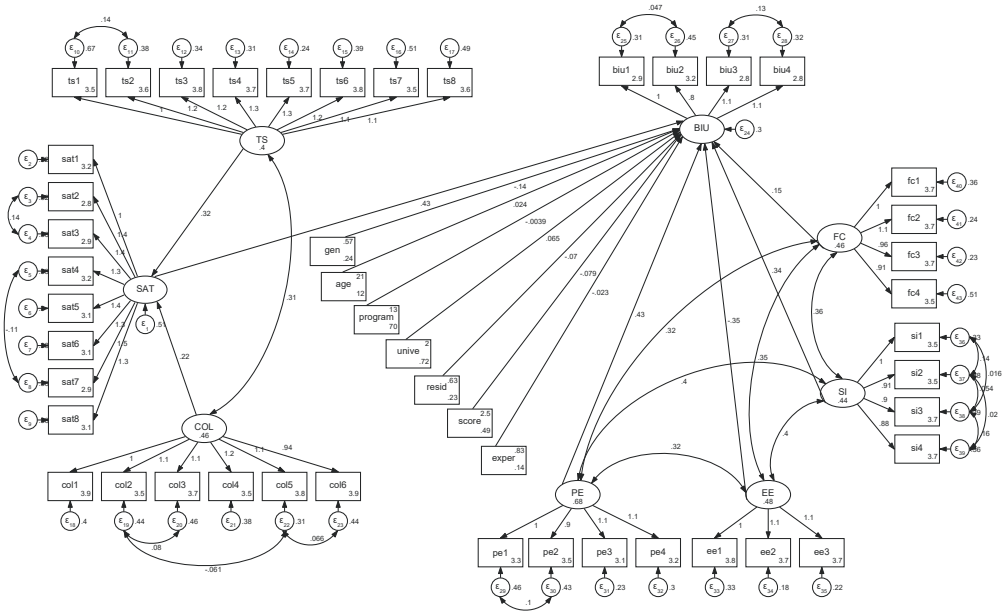
With respect to the confirmatory factor analysis or measurement model for satisfaction and intention to use, the contribution of each of the items was evaluated (convergent validity) and the covariances between the errors of each estimate, so as to eliminate those with high covariance and whose information is redundant or does not correspond theoretically with the factor (discriminant validity), as well as the adjustment indexes of each model.

For the model measuring both satisfaction and intention to use, reliability was validated through the Raykov coefficient, where all values exceed 0.70; in addition, convergent validity is also achieved since the results of the AVE are greater than 0.50 and discriminant validity given that the correlations are lower than the AVE. As for the fit indices, both models guarantee the values established in the literature.

Structural Equation Model

Based on the measurement models or confirmatory factor analysis for both satisfaction and behavioural intention to use, in which the fit indices, internal reliability and convergent and discriminant validity have been validated, the global measurement model can be constructed and the structural equation model estimated, the graphic results of which are presented in the path diagram (Figure 1). The path diagram of the model shows the latent variables (endogenous and exogenous) through ovals and the moderating or exogenous variables with boxes; the arrows showing the covariance relationships between the factors (latent variables) are the bidirectional ones, while those going from each factor to the items (variables observed in boxes) show the magnitude and sign of the relationships.

Figure 1. Structural model for intention to use e-learning.



The results of the global model presented in the path diagram through the lines that reach the latent variables, endogenous or exogenous, indicate the coefficients of the structural model detailed in Table 4. Regarding the satisfaction construct, both teaching support and student collaboration show a direct and significant relationship corroborating hypothesis H1. As the student perceives greater support and accompaniment from the teacher and greater interaction among peers (peer effects), satisfaction with the distance learning process increases.

Table 4. Total effects (structural model)

	Coefficients	Standard error
Satisfaction (SAT)		
Teacher support (TS)	0.32***	0.06
Student collaboration (COL)	0.22***	0.05
Behavioural intention to use (BIU)		
Satisfaction (SAT)	0.44***	0.04
Expectation of performance (PE)	0.44***	0.06
Expectation of effort (EE)	-0.35***	0.11
Facilitating conditions (FC)	0.15**	0.07
Social influence (SI)	0.34*	0.19
Gender (gen)	-0.14***	0.04
Age (age)	0.02***	0.01
Program (program)	-0.00*	0.00
University (Unive)	0.06***	0.02
Residence (resid)	-0.07*	0.04
Score (score)	-0.08***	0.03
E-learning experience (exper)	-0.02	0.05

Note: Significant up to 1% (***), between 1% and 5% (**), between 5% and 10% (*). Values in parentheses correspond to standard errors.

Similarly, satisfaction as a mediating variable has a positive and significant effect on behavioural intention to use, which allows us to validate hypothesis H2. In turn, behavioural intention to use also presents a significant relationship with the constructs of performance expectancy, effort expectancy, facilitating conditions and social influence, being positive in the first three cases and negative in the last one, as proposed in hypothesis H3. If the student has an environment that facilitates distance education, influenced by peers and family members, as well as an optimal performance of technological platforms and tools and a perception of less effort, he/she will have a greater willingness to adopt this modality.

As for the moderating variables, all were significant except previous experience in distance education, which allows validating hypothesis 4 with respect to the rest of the variables such as gender, age, program, university, area of residence and grade point average. The behavioural intention of use is higher if the student is male, older, studies at UNACH in social sciences and humanities programs, resides in rural areas and has a low-grade point average.

To validate the model, the goodness-of-fit indices were used, which are detailed in Table 5, indicating values that satisfy the conditions expressed in the literature for both the errors and the rest of the indices.

Table 5. Goodness-of-fit indices of the structural model.

Indexes	Criterion	Structural model
Chi2/df	Less than 3	2.75
SRMR	Less than 0.08	0.08
RMSEA	Less than 0.08	0.05
Comparative fit index (CFI)	Greater than 0.90	0.93
Tucker-Lewis's index (TLI)	Greater than 0.90	0.92

With respect to the direct effects associated with the coefficients that measure the relationship

between each of the approaches and their constructs, all were statistically significant, showing a direct relationship, which implies that if each of the satisfaction, teacher support and student collaboration approaches improves, the satisfaction dimension increases; the same occurs in the case of the behavioural intention to use, which is positively related to the items of each construct.

As for the indirect effects, they show the influence of all the constructs (satisfaction, teaching support, collaboration among students, expectation of functioning, expectation of effort, facilitating conditions and social influences) as well as the moderating variables in each of the four items that make up the behavioural intention to use which are given by: "I intend to continue with distance education" (Biu1), 'I plan to enrol in some distance program, training or education' (Biu2), 'I prefer distance education' (Biu3), 'I like to study at a distance' (Biu4), similar behaviour is evident (Table 6).

Table 6. Indirect effects

	Indirect effects			
Variables	**Biu1**	**Biu2**	**Biu3**	**Biu4**
SAT	0.43***	0.34***	0.47***	0.46***
	(0.03)	(0.03)	(0.04)	(0.04)
TS	0.13***	0.10***	0.14***	0.14***
	(0.02)	(0.02)	(0.02)	(0.02)
COL	0.095***	0.07***	0.10***	0.10***
	(0.02)	(0.01)	(0.02)	(0.02)
PE	0.43***	0.34***	0.46***	0.46***
	(0.06)	(0.04)	(0.06)	(0.06)
EE	-0.34***	-0.27***	-0.37***	-0.36***
	(0.11)	(0.08)	(0.11)	(0.11)
SI	0.33*	0.26*	0.36*	0.35*
	(0.19)	(0.15)	(0.20)	(0.20)
FC	0.15**	0.12**	0.16**	0.16**
	(0.07)	(0.05)	(0.07)	(0.07)
Gender	-0.13***	-0.10***	-0.14***	-0.14***
	(0.03)	(0.03)	(0.04)	(0.04)
Age	0.02***	0.01***	0.025***	0.02***
	(0.005)	(0.004)	(0.006)	(0.006)
Program	-0.003*	-0.003*	-0.004*	-0.004*
	(0.002)	(0.001)	(0.002)	(0.002)
University	0.06***	0.05***	0.07***	0.06***
	(0.03)	(0.01)	(0.02)	(0.02)
Residence (resid)	-0.06*	-0.05*	-0.07*	-0.07*
	(0.03)	(0.03)	(0.04)	(0.04)
Score (score)	-0.07***	-0.06***	-0.08***	-0.08***
	(0.02)	(0.02)	(0.02)	(0.02)
E-learning experience (exper)	-0.02	-0.01	-0.02	-0.02
	(0.05)	(0.04)	(0.05)	(0.05)

Note: Significant up to 1% (***), between 1% and 5% (**), between 5% and 10% (*). Values in parentheses correspond to standard errors.

Specifically, similar relationships to the structural model, positive and significant, were found between the four items and the constructs of teacher support, peer collaboration, effort expectancy, facilitating conditions and social influence, and inversely with effort expectancy. With respect to the

moderating variables, all are significant except for previous experience in distance education, with the same signs as in the structural model.

Discussion

General Insights

The findings of this research on distance education adoption intention reinforce and extend previous studies in the field, emphasizing that, in addition to technological factors, contextual and personal variables also significantly influence adoption intention. This is consistent with Venkatesh et al. (2003), who in their UTAUT model included elements such as social influence and facilitating conditions, as well as moderating variables. In this sense, the results suggest that distance education cannot be evaluated only from a technical perspective but requires consideration of the social and cultural context of the students, as well as psychological and personal considerations.

Also, in line with the studies of Bordios et al. (2022), Åkerfeldt et al. (2023), Sparboe-Nilsen et al. (2024), Baber (2020), Karadağ et al. (2021) and Al-Fraihat et al. (2020), the level of teacher support and peer interaction and collaboration were found to be critical in achieving learner satisfaction with this modality by decreasing transactional distance and mitigating the main issues of e-learning relative to face-to-face education (Tabatabaeichehr et al., 2022; Arslan & Yilmaz, 2022). The evidence found shows that these constructs positively and significantly influence satisfaction, the latter being a mediating variable of behavioural intention to use, as proposed by Bervell et al. (2024), Masrani et al. (2023) and Özgen & Reyhan (2020).

With respect to behavioural intention to use, the findings corroborate what was proposed by the UTAUT model (Venkatesh et al., 2003), in the sense that such intention is positively influenced by familiarity with the technology (expectancy of functioning), facilitating conditions and social influence, and negatively influenced by effort expectancy (Krasodomska & Zarzycka, 2022; Al-Balas et al., 2020; Fawaz & Samaha, 2021; Lee et al., 2021; Bacci et al., 2022; Soldatova & Rasskazova, 2022).

Facilitating conditions are relevant in developing countries, as there are limitations in internet access and device availability, especially in rural areas (Zhou et al., 2022; Da Silva-Pontes et al., 2024). One might then expect this to be evidenced when analysing the behaviour of moderating variables, particularly the area of residence; although there is no consensus in the literature on the effect of living in rural areas, there could be a lower willingness to opt for the modality (Lembani et al., 2019; Syahruddin et al., 2021).

In contrast, the results of the structural model show that students in these rural areas have a higher intention to opt for the distance mode. The reasons for this behaviour could be linked to an analysis of the costs and benefits of the modality, where the benefits derived from not moving to urban areas where HEIs are located are greater than the costs of connectivity and equipment, thus reducing social distancing

and the gaps between the countryside and the city (Wang, 2022). This situation can be explained by the fact that, in the specific case of Ecuador, there is a high level of student mobility, which usually represents an average of 40 per cent of the total number of students. This preference is motivated by the need to reduce costs and travel time, take advantage of the flexibility offered by this educational model, and maintain close ties with their family and social environment.

The findings also show evidence of the influence of variables such as gender or age, with which there is no consensus in the literature regarding the intention to use e-learning; in the first case, studies such as those of Zhang et al. (2020) and Ramírez-Correa et al. (2015) show a greater effect on men, including a greater intention to use, which is corroborated by this research. In the second case, the results indicate that age is a factor that motivates the adoption of the distance modality, as proposed by Al-Mawee et al. (2021).

With respect to the area of study (programs), those related to health or engineering tend to be less likely to be taken in distance mode, due to the practical and laboratory component that frame the teaching, which is evidenced in the structural model. Similarly, the university was also a determining factor, identifying differences in satisfaction and intention to use, explained through the experience in distance processes and the technological infrastructure of each institution, as stated by Baber (2020) and Karadağ et al. (2021). This implies that educational institutions should strengthen their technological training programs to reduce resistance to change, as well as institutional support and technological infrastructure, like studies such as those of Sun et al. (2008).

With respect to the effect of the students' previous experience, an inverse and non-significant relationship with the intention of use was identified, which does not contradict what is stated in the literature, where positive experiences increase the intention of use, given that this study only considers whether they have previous experiences and not their quality. Thus, the sense of the relationship is explained to the extent that those students who claim to have previous experiences have not been satisfied, decreasing the intention to adopt distance education as a mode of study; corroborates the findings of behavioural economics, in the sense that cognitive biases such as loss aversion can make those with less satisfactory experiences reluctant to adopt distance learning, even when technological conditions improve (Al-Balas et al., 2020; Fawaz & Samaha, 2021; Lee et al., 2021; Bacci et al., 2022; Soldatova & Rasskazova, 2022).

Similarly, the empirical evidence did not seem to identify an effect of grade point average on the intention to use e-learning, but among the study findings it is observed that students with lower grade point averages prefer distance education more. This may be due to a bias generated by the conditions of the pandemic, which facilitated the processes and made the evaluations more flexible, increasing the satisfaction of students with lower grades.

Theoretical and Management Contributions

From a theoretical perspective, this research contributes to the understanding of the phenomenon of distance education adoption by integrating satisfaction as a mediating variable and moderating variables such as gender, age or area of residence, little explored in the literature, based on the UTAUT model.

In terms of educational management, the study's findings suggest that to improve the adoption of distance learning, educational institutions should focus on three key areas: teacher support, peer collaboration, and technological infrastructure. First, it is crucial that teachers receive ongoing training in digital tools and pedagogical strategies to improve interaction and support for students. In terms of collaboration, online group activities and the use of collaborative platforms should be promoted to increase interaction among students. In addition, universities should strengthen their technological infrastructure, ensuring that platforms are accessible, compatible with common devices, and that efficient technical support is available. It is also important to reduce the digital divide by providing access to equipment and connectivity for students, especially in rural areas. These actions will not only improve student satisfaction but also increase the intention to adopt distance learning, especially among students in areas with transportation difficulties.

Another contribution of this research is the identification of barriers and facilitators in distance education, which enables educational managers to design more effective interventions. In addition, the study suggests that those HEIs that have more, and better technological infrastructure and more trained teachers increase student satisfaction and manage to modify preferences towards distance education.

Despite the contributions of this research, there are some limitations that should be considered. First, the study could be extended to other HEIs and stratified by areas of knowledge to identify differences in student behaviour according to the program studied. Second, given that the study is based on self-administered surveys, which may generate response biases, it is possible to complement the results with qualitative methods, such as in-depth interviews or case studies, to obtain a more detailed view of students' experiences and perceptions. Third, to evaluate the effect of previous experience, future research could incorporate an assessment of this type of experience, as well as whether it was voluntary or optional. Finally, the long-term impact of distance education on the academic performance and employability of graduates could be evaluated, given that most studies have been oriented to evaluating the experience and the change of modality, without considering the effects on academic performance and the labour market. In particular, the pandemic conditions may have biased academic results, due to flexibility, limited experience and laxer evaluations that led to higher levels of satisfaction and increased preferences of students with lower performance towards the distance mode.

Conclusion

This study provides empirical evidence on factors influencing the intention to adopt distance education, highlighting satisfaction, expectancy of functioning, facilitating conditions, and social influence. The results reinforce previous findings in the literature and provide new insights by including sociodemographic and institutional factors.

Through the findings of the structural equation model, the proposed hypotheses linked to a direct and significant relationship of teacher support and peer collaboration with satisfaction, and of this as a mediating variable with behavioural intention to use, were accepted. In turn, this adoption behaviour also showed a direct relationship with performance expectations, facilitating conditions and social influence, and an inverse relationship with effort expectations. Finally, although the hypothesis of the existence of an effect of moderating variables on intention to use was validated, the results in some cases do not corroborate what has been suggested in the literature. Being male, living in rural areas, being older, studying programs related to social sciences or humanities, having a lower grade point average and studying in HEIs with more experience in e-learning, increase the intention to adopt the distance mode.

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Reconsidering Internationalisation: Navigating the challenges of Chinese private higher education institutions

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Abstract. This study examines the internationalisation of Chinese private higher education institutions (CPHEIs). It addresses a notable gap in the literature which has primarily focused on public universities. Drawing from qualitative case studies of five CPHEIs in Shaanxi Province, this study examines the key rationales, challenges and strategies deployed by CPHEIs and identifies emerging opportunities within the Asian higher education landscape. The findings reveal that CPHEIs employ an inward-oriented internationalisation, not to pursue global prestige, but to reform internal governance, enhance students' employability, and secure financial resilience. Those strategies include intra-regional collaboration within Asia, the pursuit of discipline-specific accreditations, and the integration of international resources into institutional development. This study provides insights into the internationalisation processes and practices of CPHEIs through the lens of an extended global agency heuristic theory, with potential broader relevance for similar private institutions in China and abroad.

Keywords: Internationalisation, Higher Education, Private Higher Education, Glonacal Agency Heuristic, East Asia, Demographic Decline

Introduction

In 2022, more than one-third of global higher education students were enrolled in private higher education institutions (PHEIs), with Asia accounting for more than half of that (Welch, 2024). However, the quantity, quality, and positioning of these institutions vary considerably across countries, influenced by national systems, market conditions, and state ideologies (Chao, 2023; Levy, 2018). Typically emerging during the period of rapid massification, PHEIs often occupy lower tiers within national hierarchies, with notable exceptions in countries like the US and Japan (Levy, 2018).

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Recently, however, PHEIs, particularly in East Asia, have faced mounting challenges arising from sharp demographic decline, resulting in institutional mergers and closures in Taiwan, Japan and South Korea (Hou & Lu, 2024; Huang et al., 2025). This convergence of demographic contraction, economic uncertainty and geopolitical decoupling marks a pivotal juncture for the private higher education sector in East Asia, compelling institutions to rethink their original strategies and engagement models. Amidst these pressures, geopolitical uncertainties and shifting patterns of international students' mobility, private institutions often position internationalisation as a viable strategy to enhance the quality and target new student markets (Welch, 2024).

Existing research on internationalisation has primarily focused on world-class public universities, leaving a gap in understanding the motivations, practices, and experiences of the much larger body of PHEIs. This study addresses this gap by examining the case of China, where PHEIs have proliferated over the past few decades but now confront simultaneous challenges of demographic pressure and quality assurance. Drawing on the *glonacal agency heuristic* (Marginson & Rhoades, 2002), this research investigates the rationales, challenges, and strategies that Chinese PHEIs (CPHEIs) employ in their internationalisation efforts and assesses whether such strategies can help them navigate their current crises.

Accordingly, this study addresses the following research questions:

1) What rationales drive the internationalisation of CPHEIs?
2) How do these institutions navigate the challenges associated with implementing strategies?

By illuminating how CPHEIs navigate internationalisation within China's unique political and economic framework, this study contributes to ongoing debates about the diversification and resilience of the higher education system in East Asia.

Literature Review

The Crisis of PHEIs in the East Asian Higher Education System

Asia holds the world's largest concentration of private higher education, with 42.1% of the region's total enrolment being attributed to PHEIs, representing 56.9% of the global private enrolment (PROPHE, 2015). Although data from the UNESCO (UIS, n.d.) show a relatively stable share of private enrolment, reaching approximately 80% in affluent East Asian societies such as Japan and South Korea, this stability masks a crisis stemming from demographic collapse, financial pressure, quality crisis, and internal governance challenges in PHEIs.

First, the most existential threat to PHEIs in East Asia is demographic contraction. In countries and regions like Korea, Japan, and Taiwan, an ageing population and low birth rates have led to a

decline in PHEIs and difficulties in sustaining student recruitment (Chao, 2023; Levy, 2013). In Japan, for example, the population of 18-year-olds declined from 2.1 million in 1992 to 1.2 million in 2015, resulting in nearly half (45.8%) of private universities falling short of complete enrolment by 2014 (Yamada, 2018). Similarly, South Korea's population is expected to fall further to around one-third by 2100, a trend that will inevitably shrink the domestic student market (Y. Yang et al., 2024). The situation in Taiwan is equally alarming, where total enrolment in PHEIs fell by 21.8% in 2023, representing a loss of more than 138,000 students in just five years (Hou & Lu, 2024). This demographic squeeze has already forced numerous PHEIs to close or merge, a trend that is expected to accelerate in the coming years (Levy, 2024).

Second, the demographic downturn exacerbates the inherent financial fragility of East Asian PHEIs. Unlike their public counterparts, PHEIs receive limited funding from the government and depend heavily on student tuition fees, which typically account for over 90 per cent of institutional revenue (Bang, 2013; Kim & Lee, 2006). While governments in East Asian countries like Japan, Korea, and China provide soft loans, tax concessions, and land grants to support the sector, this support comes with restrictions on tuition policy, faculty recruitment, admissions, curriculum development, and internal governance (Levy, 2006, 2018; Welch, 2021). Consequently, when student numbers decline, the tuition-dependent model becomes unsustainable. Furthermore, tuition fees are often politically sensitive and capped, as seen in Taiwan, preventing institutions from increasing revenue even as operational costs rise (Bang, 2013; Kim & Lee, 2006). The Covid-19 pandemic intensified this crisis by reducing household incomes and families' ability to afford private tuition (PROPHE, 2020).

Third, issues of quality perception and institutional status continue to constrain the legitimacy and competitiveness of PHEIs. Global university rankings and national quality assurance (QA) mechanisms have solidified a stratified hierarchy that privileges research-oriented public institutions while marginalising teaching-focused private ones. For instance, of the 42 Asian universities ranked among the top 200 in the QS World University Rankings 2024, only six are private, all of which are located in Korea and Japan (QS Top Universities, 2025). National QA mechanisms, moreover, tend to apply uniform evaluation standards that prioritise research capacity and outcomes (Welch, 2024). This one-size-fits-all approach disregards the distinctive missions and limited resources of PHEIs, diverting leadership attention from institutional innovation toward compliance with quantitative metrics. Consequently, this dynamic perpetuates a cycle where low prestige hinders the ability to attract resources, which in turn constrains quality improvement.

Finally, internal institutional weaknesses further compound these external pressures. Many PHEIs are small-scale, family-owned institutions with low admission thresholds, which makes it challenging to reconcile academic quality with profitability (Bang, 2013). Conflicts of interest between founders, shareholders, and academic leaders can undermine transparency and accountability in decision-making (X. Liu, 2018). In some cases, family control and non-professional governance restrict long-term

strategic planning and discourage qualified academics from assuming leadership roles (Bang, 2013). These governance challenges are particularly acute in East Asia, where cultural traditions of hierarchical management often intersect with the profit motives of private ownership.

In summary, East Asian PHEIs face an interlocking set of crises – demographic, financial, reputational, and managerial – all of which threaten their sustainability. These challenges have compelled many institutions to seek alternative survival strategies, among which internationalisation emerges as one of the most viable responses (Welch, 2024). Furthermore, these converging challenges underscore the importance of analysing PHEIs not only from the perspective of national boundaries but also within the framework that captures the influence of global, national, and local forces – the *glonacal agency heuristic* (Marginson & Rhoades, 2002).

Emerging Opportunities for East Asian PHEIs in a Shifting Geopolitical Landscape

The intensifying geopolitical tensions, particularly between the US and China, are reshaping the global higher education landscape (Mok & Marginson, 2021). While these tensions have disrupted elite scientific collaborations and restricted academic mobility, they are simultaneously creating opportunities for PHEIs, especially those with flexible governance structures, to expand intra-regional student recruitment and engage in entrepreneurial and pragmatic international collaborations (Qureshi & Khawaja, 2021).

Across Asia, patterns of student mobility are undergoing a subtle but consequential shift. Perceptions of heightened visa barriers and social friction in Western countries, alongside post-pandemic economic considerations, make familiar, cost-effective East Asian hubs more attractive (Mok, 2021). This trend is actively supported by national policies such as Japan's "300,000 International Students Plan" and South Korea's "Study Korea 300K Project" (Huang et al., 2025; Li & Huang, 2024). Recent data confirms this trend. In 2022, South Korea hosted 166,892 international students, 40 per cent of whom were from China and almost 23 per cent from Vietnam (Korean Education Statistics Service, 2022), while in Japan, international students from other Asian countries such as China, Vietnam, Nepal, Korea, and Indonesia account for 80 per cent of total foreign enrolment in 2022 (Li & Huang, 2024). China, too, has strengthened educational exchanges with countries along the Belt and Road Initiative, enrolling growing numbers from South Korea, Thailand, and Malaysia (Erudera, 2023). For PHEIs, which often excel in market-responsive program delivery and student services, this regional pool of mobile students represents a potential market to offset domestic demographic decline through regionally oriented internationalisation strategies.

The same geopolitical tensions restricting collaboration between elite research universities are, paradoxically, encouraging new forms of pragmatic collaboration better aligned with the mission of PHEIs. Lee and Haupt (Lee & Haupt, 2021) note this rise of 'scientific nationalism', which largely views research as a tool to serve national interests, thereby undermining 'scientific globalism' in the

collaborative global science system. In contrast, East Asian PHEIs, often specialising in vocational training, business, and cultural studies, are less entangled in the 'securitisation of research' and are well-positioned to serve as agile partners in cross-border educational initiatives (Mok, 2021). Additionally, these institutions can form strategic alliances with universities in OECD countries that are also facing enrolment challenges and seeking new, less politically sensitive models of collaboration (Knight & De Wit, 2018).

Despite these emerging opportunities, existing studies remain predominantly policy-oriented, offering limited insight into how PHEIs operationalise internationalisation. There is a notable lack of empirical studies on how PHEIs in East Asia implement internationalisation to address systemic challenges. Therefore, this paper aims to address this gap through a case study of Chinese PHEIs, examining their strategies and experiences in the context of these shifting geopolitical dynamics.

The Case of Chinese Private Higher Education Institutions (CPHEIs)

Chinese private higher education institutions (CPHEIs) exemplify the broader crises facing East Asian PHEIs, yet their experience is filtered through the unique conditions of China's state-socialist market economy. CPHEIs have experienced rapid expansion since their formal recognition under the 1999 constitutional amendment – the *Tentative Stipulations on Private Enterprises*. By 2024, CPHEIs had enrolled approximately 10.52 million students, representing over one-quarter (27.04%) of the country's total higher education enrolment (Ministry of Education, 2025). Despite this impressive scale, CPHEIs continue to grapple with regional challenges, including demographic pressures, financial precarity, and quality perception issues.

Like their regional counterparts, CPHEIs rely heavily on tuition fees, which account for over 80 per cent of their revenue. The tuition fees are often three to five times higher than those charged by public institutions, creating acute vulnerability to enrolment fluctuations (Morgan & Wu, 2011). Furthermore, they are entrenched in the lower tiers of a stratified hierarchy, battling the pervasive social bias of 'public is senior and private is inferior' (*guan zun min bei*), which hampers their ability to attract qualified faculty and achieve social recognition (Yan, 2005). This reliance on young or retired part-time teachers raises questions about faculty qualifications, teaching quality, research capacity, and long-term institutional legitimacy (Morgan & Wu, 2011; Teixeira et al., 2017).

However, the Chinese case also diverges from regional patterns in several significant ways. First, the relationship with the state is ambiguous. Governed by the *Private Education Promotion Law*, CPHEIs are granted market-oriented autonomy yet are simultaneously subject to indirect yet pervasive state control through mechanisms like the University Communist Committee of the Party (UCCP), creating a system of 'constrained autonomy' (Bernasconi, 2011; X. Liu, 2020b). Second, the regulatory environment is uniquely restrictive, as the government enforces a recruitment policy that relegates private institutions to a secondary pool of students, directly cementing their lower entry

requirements and reinforcing their role in absorbing demand (Levy, 2018). Finally, internal governance tensions are intensified by the power of entrepreneurial founders and major shareholders, whose pursuit of financial returns can conflict with academic interests and long-term institutional quality, a challenge noted across the region but particularly acute in China's rapid, market-driven expansion (X. Liu, 2020a; Mok, 2016; Zheng & Kapoor, 2021).

Taking those dynamics together, CPHEIs operate within a complex *glonacal* configuration. Globally, they remain under the influence of the international ranking systems and academic norms defined by elite public universities, particularly when CPHEIs strategically opt into the broader market for international visibility and recognition. Although, nationally, they remain constrained by strict and arbitrary regulations, as well as supervision by the Chinese Communist Party, locally, CPHEIs respond to regional market, municipal, and industrial dynamics. Their position is thus both marginal yet strategic, creating a situation in which CPHEIs, while structurally constrained, retain the agility to experiment with strategies such as internationalisation, which public institutions often cannot pursue.

Recognising these multi-level dynamics, the following section discusses how CPHEIs employ internationalisation not as a mere pursuit of recognition or financial gain, but as a pragmatic survival strategy – one that aims to reconcile market demands, state oversight, global aspirations, and demographic constraints.

The Internationalisation of Chinese Private Higher Education Institutions

Amid the challenges outlined above, internationalisation has emerged as a strategic pathway through which Chinese private higher education institutions (CPHEIs) seek to enhance competitiveness, legitimacy, and long-term sustainability. The literature on what drives the internationalisation of Chinese higher education primarily focuses on public universities' desire to establish world-class universities, project soft power abroad, and increase global academic collaboration (Xie & Freeman, 2023). Flagship initiatives, such as the Thousand Talents Plan, the Foreign Experts Program, and the China Scholarship Council (CSC), have supported outbound mobility, joint research, and the recruitment of international faculty, all aimed at strengthening elite research universities (W. Liu, 2021; Xie & Freeman, 2023; Zha et al., 2019). Additionally, 'outward-oriented' soft power initiatives such as Confucius Institutes and the Belt and Road have further reinforced the state-centric model in promoting international engagement (Wu, 2021).

The closure of numerous Confucius Institutes abroad amid the geopolitical tensions, tighter restrictions on academic mobility, and the termination of specific transnational programs highlight the vulnerability of a strategy that relies predominantly on state-sponsored prestige projects. These developments create a strategic opening for CPHEIs, which have historically been marginalised within national internationalisation policies. Absent from these state-sponsored talent development programs and prestigious projects, CPHEIs have adopted a markedly different approach to internationalisation-

one oriented toward opportunistic partnerships that leverage internal governance flexibility and access to transnational resources (X. Liu, 2020b). Furthermore, China's open-door policy has encouraged the establishment of joint programs and foreign educational ventures within its borders, providing a legal foundation for CPHEIs to engage in cross-border education and investment (Morgan & Wu, 2011; L. Wang, 2014).

Additionally, the Chinese government adopted a more flexible policy, allowing a certain degree of autonomy in the internal governance of private universities (X. Liu, 2020b). Revised in 2017, the *Private Education Promotion Law of the People's Republic of China* provides a legal basis for greater autonomy through a 'president responsibility system under the leadership of the board of directors'. This governance structure enables more distributed financial and managerial control, allowing for quicker decision-making compared to their public counterparts. Furthermore, the number of high-quality transnational programs is limited in CPHEIs. At the same time, demand from local students and those from countries along the 'One Belt and One Road' initiative remains high (Xue, 2018). Currently, there are 2140 nationally approved transnational programs within Chinese universities, of which only 128 are affiliated with private institutions, accounting for 5.9% of the total (Xue, 2018). Nevertheless, the growing demand for Sino-foreign cooperative programs (SFCPs) and the increasing mobility of students from Belt and Road countries have created a market niche that CPHEIs are beginning to exploit. Finally, private institutions, imbued with an entrepreneurial spirit, can help resolve the demand-response imbalance through internationalisation, as this will lead to various external university models, transnational investment, and the mobility of talent (Clark, 1998). Compared to research-intensive public universities, CPHEIs could transform themselves into entrepreneurial universities to assist graduates in adaptable employment opportunities. For CPHEIs, internationalisation is less a tool for global ranking and more a practical strategy for institutional survival and market differentiation in a challenging environment.

Existing research provides a robust account of the structural challenges confronting East Asian PHEIs and the top-down, state-led model of internationalisation in China. However, relatively little attention has been given to how PHEIs as entities are subject to these forces, creating a 'crisis narrative' that overlooks their capacity for strategic agency. There is a critical lack of analysis regarding how CPHEIs actively interpret and navigate this complex environment. While studies note their entrepreneurial potential in passing (W. Liu, 2021; Xue, 2018), few offer a systematic, theory-informed examination of the specific rationales and strategies they deploy in their internationalisation efforts. This study addresses this gap by applying the *glonacal agency heuristic* to centre the strategic actions of CPHEIs in the interstices of state policy and global geopolitics.

Conceptual Framework

To analyse the agency of CPHEIs, this study employs the *glonacal agency heuristic* theory, initially proposed by Marginson and Rhoades (Marginson & Rhoades, 2002) and subsequently revisited and revised by Marginson (Marginson, 2022). The framework conceptualises higher education as a multi-scalar arena in which global, national, and local dimensions interact dynamically rather than operate as separate layers. Institutions are thus viewed as agents that both respond to and reshape these forces through their practices.

The *glonacal agency heuristic's* prior application has been widely applied to public, research-intensive universities. Liu and Metcalfe (H. Liu & Metcalfe, 2016) employed 'layers and conditions' to examine the impetus and resistance of implementing internationalisation in a Chinese public university. Yang et al. (L. Yang et al., 2021) employed it to investigate how Chinese public research universities respond to global and national forces in pursuing world-class status. However, the application to private higher education, especially in the Chinese context, remains underexplored. This study extends the framework by demonstrating how CPHEIs which lack direct state funding and face demographic challenges still exercise agency within the global, national, and local spheres.

In doing so, the study helps bridge a conceptual gap in the literature by demonstrating how institutional agency operates not only in elite, state-supported universities but also in non-elite, private, and resource-constrained contexts. This extension helps reveal the flexible and adaptive nature of internationalisation among institutions that function within state authority but without its support.

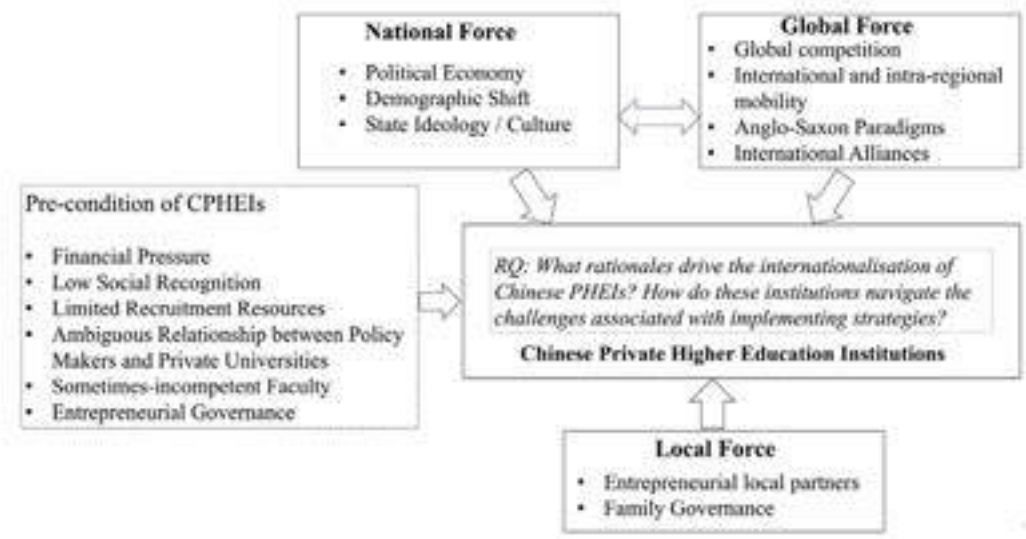


Figure 1. Global, national, and local forces in the development of CPHEIs

Note: Adapted from Marginson and Rhoades (2002) *Glonacal Agency Heuristic* and expanded by institutional preconditions

The present study follows Yang et al. (L. Yang et al., 2021) by treating CPHEIs as local organisational agents. Figure 1 presents the study's conceptual framework, delineating four distinct dimensions of influence. Global forces encompass the competitive pressure of international rankings, the dominance of Western academic paradigms and the opportunities in intra-regional student mobility during the geopolitical decoupling. Nationally, the Chinese state exerts a powerful influence through policy regulation, supervisory mechanisms and national quality assurance regimes. Locally, CPHEIs respond to the demands of municipal governments, local industry, and economic development, as well as competition. Additionally, this framework presents institutional preconditions, including financial precarity, low social recognition, constrained recruitment resources, ambiguous government relationships, inadequate faculty, and entrepreneurial governance, as detailed above.

Overall, this conceptual framework positions CPHEIs as agents operating within a multi-layered complex environment of overlapping systems of influence. It emphasises the adaptive nature of the internationalisation strategy adoption, which reflects the ongoing balancing between global aspirations, national policy constraints, and local realities.

Methodology

This study employs a multiple case study design to examine the rationales and practices of internationalisation across five Chinese private universities. These institutions navigate complex interactions among global, national, and local dimensions of influence. This approach aligns with Yin's (2018) argument that case studies enable an in-depth understanding of complex social phenomena by focusing on specific 'cases' while retaining a holistic and real-world perspective.

The five universities (P1-P5) are located in Shaanxi province, a higher education hub in central China, and the historical starting point of the Silk Road. They were purposively selected for their rich and diverse internationalisation practices. Shaanxi hosts 110 higher education institutions with over 1.6 million in-school students, and it leads central and western China with 61 Sino-foreign cooperative programs and institutions (Ministry of Education, n.d.).

The selected cases, established between 1987 and 2003, are among the earliest CPHEIs and maintain strong national rankings (e.g., (China Alumni Rankings of CPHEIs., 2022; Wu Shulian's Rankings of CPHEIs, 2022). Each institution enrols over 20,000 students and explicitly identifies as an 'international university', integrating internationalisation into its mission statement and strategic plan. All five have dedicated organisational units responsible for international affairs. Two institutions (P3 and P4) host international research centres, while P3 operates an overseas campus in Singapore. P1 and P5 offer nationally approved Sino-Foreign Cooperative Programs (SFCPs), and P2 and P4 emphasise multi-language programs, with seven-language websites. All actively recruit international students and faculty and provide transnational degree programs to promote academic and professional mobility.

Data collection involved documentary analysis and semi-structured interviews. Official websites, documents, and promotional materials contextualised each university's internationalisation efforts. Twenty-two participants were interviewed (see Table 1): five university leaders (L), six administrators of international organisations (A), and eleven faculty members involved in internationalisation (F), between May 2021 and March 2023. Interviews lasted 40-60 minutes and provided multi-perspective insights from those who shape (leaders), implement (administrators), and deliver (faculty) internationalisation strategies.

Table 1. Interviewee Roles and Experience

Participant Code	Primary Role	Internationalisation Focus Area	Years of Experience in International Education	Participant's University
L1	Senior Leader	Strategy & Governance	15+	P1
L2	Senior Leader	International Partnerships & Student Mobility	15+	P2
L3	Senior Leader	Foreign Affairs & Exchange	15+	P3
L4	Senior Leader	Strategy & Governance	15+	P4
L5	Senior Leader	Strategy & Governance	10-15	P5
A1	Administrator	International Affairs Management	5-10	P1
A2	Administrator	Student Mobility & Partnerships	5-10	P2
A3	Administrator	International Student Recruitment	10-15	P3
A4	Administrator	International Cooperation	5-10	P4
A5	Administrator	International Education Programs	5-10	P5
A6	Administrator	International Office Operations	5-10	P5
F1	Faculty	Foreign Affairs Management	10-15	P1
F2	Faculty	Partnership Development	10-15	P1
F3	Faculty	International Student Support	3-5	P1
F4	Faculty	Program Leadership & Student Mobility	5-10	P2
F5	Faculty	Regional Project Management	5-10	P3
F6	Faculty	Foreign Affairs & Partnerships	5-10	P3
F7	Faculty	International Student Recruitment	5-10	P3
F8	Faculty	International Student Recruitment	10-15	P4
F9	Faculty	Student Mobility & Exchange Programs	3-5	P4
F10	Faculty	International Program Leadership	5-10	P5
F11	Faculty	International Program Teaching	3-5	P5

Data were analysed using thematic analysis (Braun & Clarke, 2006), following familiarisation, coding, and theme development. A hybrid coding approach was adopted, combining inductive coding

for emerging concepts with deductive mapping against the conceptual framework to explore rationales, challenges, and strategies across dimensions (see Figure 1). These codes were iteratively refined and grouped into themes through review, with a sample coding structure in Appendix 1. Data saturation was reached after no new data were obtained from subsequent interviews, consistent with Guest, Bunce, and Johnson's (2006) methodology which claims that data saturation is achieved when additional data collection yields no new substantive insights.

Findings

This section identifies four emergent themes in the internationalisation of CPHEIs, highlighting driving rationales, challenges, and strategic responses aligned with the research questions.

Theme 1: Innovating internal governance through Inward-Oriented internationalisation

Rationale: Familial succession and governance innovation

The governance structures of CPHEIs are pivotal to their internationalisation strategies. Among the five universities, two (P3, P4) are currently led by the children of the founders, while in the others, founders or their family members retained senior leadership roles (L1, L2, L4, A1, A3). A key rationale for internationalisation stems from this generational transition. Participants mentioned that the successors, often educated abroad, actively seek to import what they perceive as "advanced" Western governance models to professionalise their institutions (A2, L5).

At the same time, participants noted internal tensions, such as power struggles or unclear divisions of responsibility, in family-dominated governance (A4). Collectively, these accounts highlight that familial governance is a distinctive and widespread feature of CPHEIs, distinguishing them from public universities, where leaders are typically appointed by the government.

The governance model steers internationalisation toward inward-focused reform, adopting international models to reorganise internal structures and processes. Four universities emphasised reform in de-administration, combining schools into divisions and collegiate systems by learning from Western governance systems (L1, L2, L3, L4, A1, A2, F1). A2 mentioned the model of combining schools into divisions, following the example of Oxford University, in order to strengthen interdisciplinary communication. A1 describes overseas training experience as follows:

> *"During 2015 and 2017, our university arranged five groups of delegates, with over 80 administrators and faculties* [faculty members] *to go to Nanyang Polytechnic in Singapore for training in administrative governance and vocational education… We got benefits in developing entrepreneurial programs by cooperation with industry, … also implemented the reform of collegiate system, and students' communities in 2016." (A1)*

For CPHEIs, governance arrangements influenced by sponsors and families shape an

organisational culture that pursues internationalisation to gain recognition and drive internal reform (Sun & Jia, 2012; Y. Wang, 2012).

Challenges: Reconciling divergent systems and supervisory regimes

However, adopting Western models faces systemic barriers. CPHEIs operate under a top-down, administrative-managerial approach, which clashes with the faculty-led, collaborative decision-making environment of typical public Western partners (A1, A6). This divergence creates operational inefficiencies and communication barriers, as one leader highlighted:

> *"Our international partners expect their academic senate to approve curriculum changes, a process that can take a year. For us, it is an administrative decision, perhaps within a 2-hour conference, but we still must wait for their timeline, which slows everything down" (L2).*

Meanwhile, further obstacles arise from bureaucratic supervision by national and local government authorities. The process for approving international activities, such as organizing international conferences, slows initiative (F11). Furthermore, national quality assurance regimes impose rigid requirements that can impede governance innovations. As one faculty member explained,

> *"The Chinese government has a strict regulation on the ratio between instructors and students... while our revolution about the collegiate systems puts more responsibilities on the faculty. However, we still need to recruit sufficient instructors to meet the government requirement" (F5).*

Balancing global governance principles, national supervision, and familial control remains a core challenge for CPHEIs.

Strategies: Localised adaptation and capacity building

To navigate these tensions, CPHEIs adopt a strategy of selective adaptation rather than wholesale imitation. The guiding principle, as articulated by one leader, is to 'think globally, act locally' (L1). This involves a selective and gradual integration of practices, such as collegiate systems and industry-linked programs, to enhance efficiency without displacing the existing governance framework (L2, L3).

A key tactic is 'internationalisation at home,' which focuses on building internal capacity. Four universities (P1, P2, P3, P5) are investing in their faculty through targeted training, supporting doctoral studies abroad, and encouraging short-term faculty exchanges to cultivate their international experience. This approach empowers a broader base of staff to act as agents of change, ensuring that the innovation of internal governance is a distributed, institutional effort rather than a top-down directive (L1).

Through these gradual, locally grounded reforms, CPHEIs are adapting global models into practices suited to their context, enhancing their internal governance and laying the groundwork for more sustainable internationalisation.

Theme 2: Gaining social recognition through international credentials

Rationale: Overcoming credential bias and enhancing employability

Across cases, respondents described two concurrent patterns: CPHEIs are actively engaged with industry to produce tangible internship and employment pathways for graduates, yet social and institutional biases continue to devalue their degrees in employer hiring and postgraduate admissions. Some respondents (e.g., A1, A3, F11) noted that their graduates face limited social recognition, with employers and postgraduate panels often favouring graduates from public universities.

As A2 and A4 explained, this perception contributes to higher job-education mismatches, with many graduates landing first jobs in the service sector and low-wage positions. A1 mentioned that:

> "*Some graduates from the Primary Education Program often had to find employment in primary schools in suburban or developing regions to avoid competition with their counterparts from the public sector*."

Thus, collaboration with industry secures practical opportunities for many CPHEIs graduates but does not fully overcome credential bias.

In this context, international programs and credentials serve as a crucial instrument for enhancing graduates' social recognition. Graduates from these programs enjoy higher employment rates and face less bias in university applications abroad, with 40% to 70% pursuing further studies in English-speaking countries, such as Australia, the UK, or Singapore (A1, A2, F5, F8, F10). In addition, the language advantage and transnational work experience of such graduates help them secure decent jobs, including those within the Fortune Global 500 companies. F2 stated that their graduates from a Sino-French cooperation program facilitated internships and employment, involving the ZTE Corporation. In addition to international programs, two universities (P1, P4) have adopted international certificate programs to enhance students' qualifications, namely the Association of Chartered Certified Accountants (ACCA) and the Chartered Financial Analyst (CFA) programs.

Moreover, international cooperation has enriched curricula to be both pluralistic and adaptable to the employment needs of graduates. They also emphasised the incorporation of foreign teaching material, online courses in language programs, and enhanced intercultural understanding, as well as writing and critical skills in general education (A2, A3, A4, A5, F3, F9, F10). Such efforts strengthen graduates' global competencies and employability. While higher vocational education often struggles with job placement thresholds (Wan et al., 2025), private higher education students, typically from more affluent families, are better positioned to attain international degrees, thereby offsetting the limitations of credential bias.

Challenges: Student preparedness and systemic reliance on the West

This strategy, however, encounters implementation barriers. First, the student demographic of CPHEIs presents a challenge. Participants noted that students are often recruited with lower scores in college

entrance exams and possess weak English proficiency, creating a foundational obstacle for English-taught international programs (A5, F6). Furthermore, some students exhibit low learning motivation, compounding the difficulty of delivering a rigorous international curriculum (F9).

Second, the reliance on Western credentials, while a solution to bias, creates a structural dependency that undermines institutional autonomy. Western partners typically retain dominant decision-making power over curriculum, quality assurance, and academic regulations (F2, F10). This leads to a unilateral adoption of external frameworks rather than a collaborative development of distinctive programs, perpetuating a cycle where CPHEIs, as one administrator noted, 'adapt to their system rather than building a collaborative one' (A6). This dependency risks reinforcing the very symbolic hierarchy they seek to navigate.

Strategies: Pursuing autonomy and programmatic accreditations

To counter these challenges, CPHEIs have adopted two complementary strategies:

The first approach involves pursuing differentiated autonomy through regional collaboration. To reduce dependency on Western paradigms, institutions are strategically pivoting towards intra-regional partnerships in Asia. As one leader (L4) explained,

> *"We are actively developing partnerships in South Korea and Malaysia. The cultural similarity and geographic proximity make everything easier – from curriculum alignment to faculty exchange. It is a more cost-efficient and sustainable model"*.

Such collaborations facilitate the co-creation of programs that are globally engaged yet regionally relevant, promoting academic pluralism and reducing structural dependency on Western models.

The second complementary strategy focuses on the selective pursuit of discipline-specific international accreditations. Rather than competing in research-intensive global rankings, some universities (P1, P3, and P4) target discipline-specific accreditations, such as the Association to Advance Collegiate Schools of Business (AACSB) or the Accreditation Board for Engineering and Technology (ABET). These teaching-oriented benchmarks offer credible, external validation of quality that resonates with both employers and students. One leader (L3) emphasised their impact, stating that:

> "*Obtaining AACSB accreditation was a game-changer. It validated the quality of our business program globally... without requiring a massive investment in research"*.

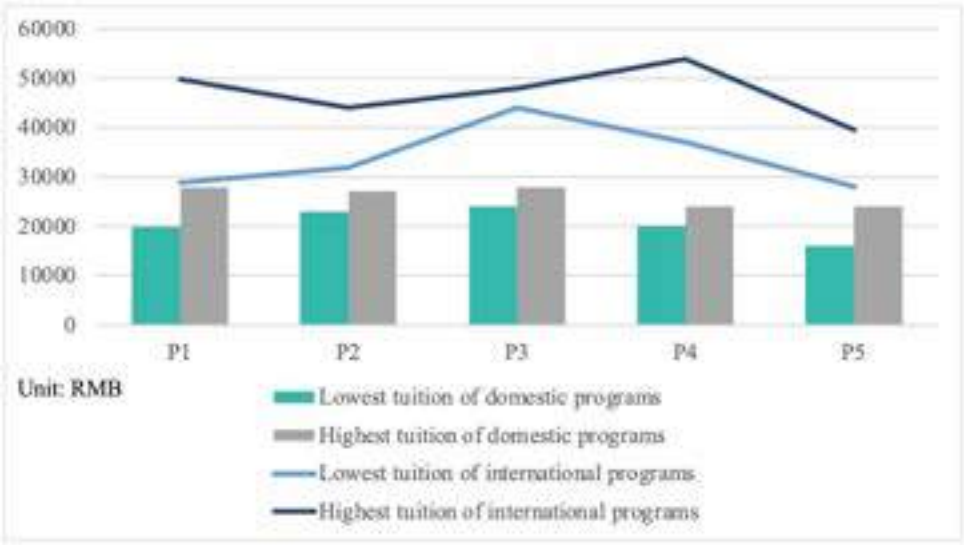
By strategically leveraging professional international and regional standards, CPHEIs can enhance their domestic reputation, strengthen employability outcomes, and directly address credential bias by demonstrating a proven commitment to educational quality in ways that align with their missions and resource capabilities.

Theme 3: Achieving market differentiation and revenue resilience

Rationale: Shifting from demand-absorption to demand-differentiation

Faced with intense demographic and financial pressures, CPHEIs are leveraging internationalisation as an integrated strategy to secure both student numbers and sustainable revenue. Participants repeatedly emphasised the problem of declining student numbers and the difficulty of filling seats (A5, F10). In 2021, with a national enrolment rate of 92.9%, almost all Chinese high school graduates could get a place in tertiary education (Ministry of Education, 2022). As a result, CPHEIs had to move from market-driven '*excess demand absorption*' to strategy-driven '*differentiated demand absorption*' (Jiang, 2021).

To address this challenge, participants suggested developing transnational programs, such as Sino-foreign cooperative programs (SFCPs). For instance, P1 has a nationally approved Sino-U.S. program, while P5 offers a Sino-New Zealand partnership. These programs enable students to earn dual degrees from both China and either the U.S. or New Zealand (A1, A6). They absorb globally recognised curricula and teaching staff from the partner universities, providing students with the opportunity to take English-taught courses and earn degrees without having to travel abroad. This approach proves economical for families who find the costs of studying abroad prohibitive, while simultaneously offering students the chance to experience Western-style education and earn a degree from a foreign university. Although the tuition fees for these dual-degree programs are double those of domestic programs, both universities report high demand, with student applications exceeding the supply (F2, F10).



Note: Data were compiled from the official websites and recruitment materials of five universities.

Figure 2: The Comparison of tuition in domestic programs and international programs

This diversification of income streams has become particularly important in light of recent government restrictions on domestic tuition increases. With tuition as the primary income source and recent government restrictions limiting fee increases for domestic programs (A1, A2, L5), CPHEIs have found greater pricing flexibility with international programs. As Figure 2 illustrates, tuition for these programs was at least one-third higher than for domestic tracks, aligning with the view of transnational education as a key revenue strategy in regulated markets.

Challenges: Programmatic burdens and an affordability crisis

However, the implementation of this strategy also reveals challenges, aptly described as a 'dance with double chains' (F3), reflecting the tension between two competing sets of curricular and regulatory requirements. As an example in SFCP in P1, the Chinese MoE enforces the inclusion of approximately six mandatory ideological and political theory courses, encompassing the study of Marxism and Maoism. On the other hand, to align with Western partners' standards, students undertake general education courses in natural sciences and liberal arts, which may involve potential ideological friction and a heavy student workload.

Furthermore, the high cost of these programs creates another major challenge. As one faculty member highlighted, tuition for international programs is *"eight to ten times that of domestic programs,"* yet *"50% to 60% of students in CPHEIs come from rural, low-income families"* (F9). These risks widen social inequities and limit the market for these premium programs.

Strategies: Emphasising quality and industry alignment

In response, the strategic focus shifts from merely generating revenue to building genuine quality and employability. Leaders emphasised the need to demonstrate a tangible value for students and families, justifying higher tuition fees.

The heads of two SFCPs (A1, A6) both underscored the need to align the program curricula with industry to equip graduates with marketable skills and high-paying job prospects. By integrating industry partnerships, internships, and applied learning into international programs, CPHEIs aim to improve graduates' outcomes and thereby justify the family financial investment.

This corresponds with similar practices adopted by Indian PHEIs in which internationalisation has been leveraged to attract students to professionally oriented disciplines such as engineering, medicine, and management, often strongly aided by supportive administration (Chanda & Betai, 2022). For CPHEIs, aligning with international standards provides a sustainable means of enhancing students' employability and skill development, thereby balancing revenue goals with educational quality and institutional legitimacy.

Theme 4: Accessing International Resources: Faculty and Finance

Rationale: recruiting global talent and capital pools

Leaders stated the need to attract faculty members with a doctoral degree and a recognised senior title (e.g., associate professor or professor) (A2, L5). The Ministry of Education (MoE) in China has intensified its evaluation of private universities over the past five years, requiring a higher proportion of faculty members to hold doctoral degrees. This is especially important for those CPHEIs that aspire to open postgraduate programs. Among all five cases, P3 was the only university authorised to deliver a postgraduate program, and leaders in other universities were preparing their applications to obtain this status (L2, L4). These efforts have driven CPHEIs to prioritise faculty recruitment as part of their agenda.

All five universities emphasised the importance of bringing in foreign talent. International faculty, especially from Belt and Road regions, consider CPHEIs attractive due to fewer promotion restrictions, flexible administrative systems and considerate intercultural communications. For example, P1's Vice President and the Dean of the Art and Design school are foreigners, appointments that remain rare even now in Chinese public universities.

Thus, to address the dual challenge of strict faculty qualification regulations and a limited domestic pool of doctoral candidates, CPHEIs increasingly rely on international recruitment strategies. Moreover, a few institutions, such as P1, have secured funding from international sources, including an interest-free loan from the World Bank, thereby diversifying their financial sources.

Challenges: Cultural friction and questioned contributions

Integrating international faculty presents several challenges, including cultural and religious differences, professional isolation, and language barriers in administration. These issues are exacerbated by a lack of staff with rich international experience, leading to potential miscommunications or ineffective negotiations with international faculty (F8, F9). International faculty who worked in private institutions also reported practical difficulties in their daily lives, such as finding Halal food or suitable spaces for religious observance (A4, F4, F5). Furthermore, their academic contributions are sometimes viewed with scepticism by local counterparts, a tension aggravated by salary disparities that can create questions about the value of international hires relative to their output (A6, F10).

These dynamics highlight the fragility of cross-cultural integration and the need for private institutions to balance internationalisation with internal cohesion and expectations.

Strategies: Fostering an inclusive culture and grassroots collaboration

To mitigate these issues, CPHEIs are proactively developing more inclusive institutional cultures. For

example, interviewees mentioned that transnational mobility provides students with exposure to other cultures and systems of learning, helps develop their personalities, and enhances their understanding of global issues (F3, F11). Programs for short-term academic visitors are also beneficial for local faculties, as they provide an opportunity to share knowledge, expose them to various teaching pedagogies, and facilitate the establishment of long-term research and teaching collaborations (A2, F5). These grassroots initiatives, including short-term academic visits and cultural exchange programs, serve not only to support international faculty but also to expose local students and staff to different pedagogical approaches and global perspectives, ultimately strengthening the institution's internationalisation capacity.

Through these bottom-up interactions, CPHEIs are gradually institutionalising the process of internationalisation not only as a form of recruitment offset strategy but also as a holistic approach that strengthens faculty, enhances quality, reputation, and cross-cultural competence.

Discussion and Conclusion

This study set out to investigate the distinct rationales, challenges, and strategies that define internationalisation within Chinese private higher education. The findings reveal a landscape that is fundamentally different from the state-led, prestige-oriented model that dominates the public sector. This discussion synthesises these insights by first outlining the core divergence between public and private institutions, then revisiting the theoretical implications for the *glonacal agency heuristic* and finally proposing a practical strategic model for private institutions (PHEIs) globally.

Public-Private Divergence in Internationalisation

This study confirms that the distinct foundational rationales of China's public and private universities lead to divergent internationalisation approaches, challenges, and strategies.

The internationalisation of Chinese public universities is led by national policy, explicitly aimed at building world-class universities, enhancing global academic collaboration, and strengthening the nation's soft power (Mok & Marginson, 2021; Zha et al., 2019). This is exemplified by massive state investment in research, leading to China surpassing the U.S. in total scientific output, and a strategic focus on climbing global rankings (Marginson & Xu, 2022). In stark contrast, CPHEIs are driven by a market-based 'logic of survival.' Their internationalisation is pragmatic, focused on market differentiation, revenue generation, and overcoming the deep-seated social bias that undermines their recognition (Morgan & Wu, 2011). This results in an 'inward-oriented' internationalisation aimed at internal governance reform, which stands in sharp relief to the 'outward-oriented' soft power projects of the public sector (Wu, 2021).

The challenges each sector faces further reinforce this divide. Macro-level geopolitical tensions, such as the closure of Confucius Institutes and restrictions on scientific collaboration with Western partners, increasingly hamper public universities (Jaiswal & Bhatt, 2021; Marginson, 2025). CPHEIs, however, grapple with meso- and micro-level structural deficits. Their challenges are less about global politics and more about operational and systemic constraints: internal governance tensions between familial control and academic professionalism, financial precarity, and the academic preparedness of their student body. Their experience, aptly described as a 'dance with double chains,' involves balancing domestic regulations with global partnership demands, a struggle distinct from the geopolitical impediments facing the public elite.

Consequently, their strategic responses differ profoundly. Public universities pursue large-scale, high-prestige partnerships and investments aimed at enhancing their standing in global rankings (Zha et al., 2019). CPHEIs, lacking the resources for such competition, leverage their agility to exploit specific opportunities. Their strategy is one of avoidance and opportunism: avoiding direct competition with elites by forming intra-regional partnerships, pursuing teaching-focused international accreditations (e.g., AACSB, ABET), and developing vocational Sino-foreign cooperative programs. This allows them to carve out a sustainable space in the overlooked interstices of the global higher education market.

Extending the Glonacal Agency Heuristic

The findings extend and refine the glonacal agency heuristic (Marginson & Rhoades, 2002) by applying it to non-elite, market-driven institutions, thereby advancing its analytical reach beyond the public sector.

Our findings demonstrate that CPHEIs are not passive recipients of global and national forces, but rather active agents who strategically navigate this multi-scalar arena. However, the nature of their agency is distinct. While public universities exercise agency in response to national mandates and with substantial state resources, CPHEIs exercise agency in response to market signals and institutional survival needs. Their agency is expressed through entrepreneurial agility and pragmatic localisation, making quick decisions to adopt and adapt global models for local relevance. This contrasts sharply with the resource-laden, prestige-seeking agency of elite public universities, illustrating that institutional agency is not uniform but is profoundly conditioned by institutional type and position within the national hierarchy.

This perspective enriches the glonacal model by illustrating that global-national-local interactions can be found not only in world-class public universities but also in private non-elite semi-autonomous institutions where agency is adopted as a practical problem-solving model rather than for prestige seeking. In this sense, CPHEIs operate within a layer of bounded agency, with actions constrained by systemic regulations, yet remaining flexible, innovative, and locally adapted.

Toward a Strategic Model for Private Higher Education

The study has practical implications in yielding a strategic model with relevance for private higher education in similarly regulated environments worldwide.

First, CPHEIs should shift from a dependent relationship on Western academic paradigms toward mutual, intra-regional partnerships. The global structure is evolving from a core-periphery model to a more pluralistic network. Regional collaboration among institutions with shared cultural backgrounds, such as within Asia, is often more feasible and reciprocal. It leverages geographic proximity, reduces cultural friction, and addresses the significant yet underserved demand for transnational education within the Global South.

Second, the most sustainable path might be to deeply integrate international resources to solve local economic and developmental needs. This involves building transnational university-industry co-innovation networks that connect international curricula to local business needs, thereby enhancing graduate employability and institutional relevance (Cai, 2022).

Third, instead of engaging in an unwinnable race for research-based prestige, PHEIs should focus on demonstrating tangible value through targeted international accreditations and direct industry alignment. Discipline-specific accreditations (e.g., AACSB, ABET) provide a credible, teaching-oriented quality benchmark that resonates with employers and students, validating program quality without requiring massive investment in research.

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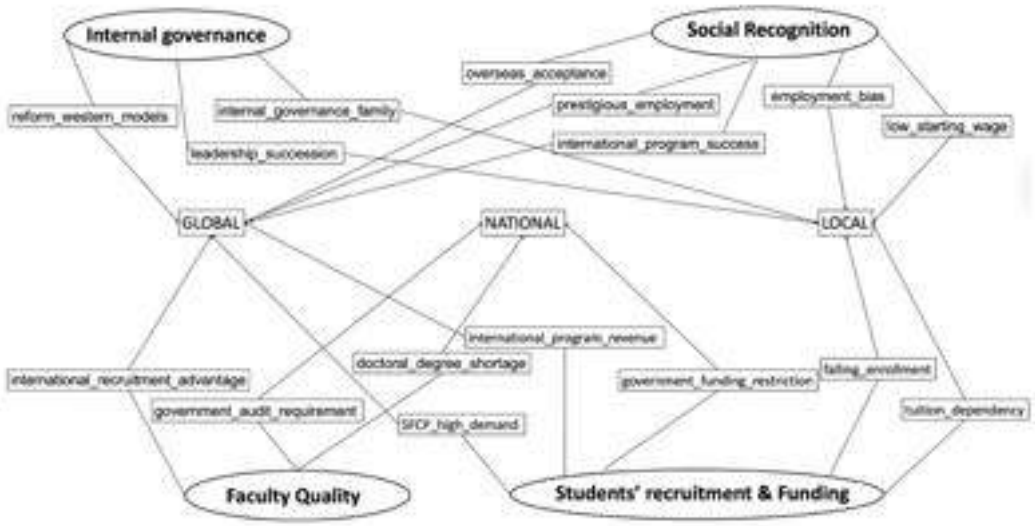
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Appendix 1: Sample coding structure

Cumulative Author Index of Higher Education Forum (Vol. 1–23)

Akira, Arimoto	Vol. 1, pp. 71–87, Recent higher education reforms in Japan: Consideration of social conditions, functions and structure Vol. 2, pp. 55–69, National policy shift on social stratification in higher education Vol. 4, pp. 1–18, Recent issues in higher education reform in Japan: The relationship between the social system and the higher education system Vol. 8, pp. 1–22, The changing nature of academic work from an international comparative perspective Vol. 17, pp. 151–175, An international and comparative perspective of the academic profession's development: With a focus on R-T-S nexus in the world and Japan
Akiyoshi, Yonezawa	Vol. 12, pp. 95–105, Development and mobility of the academic profession in East Asia
Aleksandar, Avramovic	see Laila Nordstrand, Berg Vol. 19, pp. 131–153, To be or not to be responsible? Academic research and social responsibility
Alenka, Flander	Vol. 17, pp. 177–205, How teaching and research nexus in academic attitudes, behaviours and system of promotion influences academic satisfaction? Case study of Croatia and Slovenia
Alper, Calikoglu	Vol. 17, pp. 115–134, The teaching and research nexus in Turkish academia: Lessons from an international survey
Amile, Mavundla	see Jessica, Murray
Amy Scott, Metcalfe	see Grace Karram, Stephenson
Ana M., Martínez-alemán	Vol. 22, pp. 1–15, Competition and teaching in the research university: Are these incompatible values?
Ana, Ivenicki	Vol. 16, pp. 85–96, Assessment and curricular policies of higher education in Brazil: Enhancing both performance and cultural diversity?
Ángel, Valdés-Cuervo	see Etty Haydeé, Estévez-Nenninger
Ariunaa, Enkhtur	Vol. 20, pp. 59–78, Virtual student mobility from students' perspectives: Case study from Japan; see Ming, Li,
Arthur, Ellis	Vol. 5, pp. 141–150, Service-learning in American higher education: An analysis
Atsunori, Yamanoi	Vol. 2, pp. 93–114, The academic marketplace in Japan: Inbreeding, grades and organization at research universities
Augusto, Cocorullo	see Stefano, Boffo
Aya, Yoshida	Vol. 6, pp. 103–118, The triumvirate governing Japan's higher education policy since the 1990s: Perspectives on neo-liberalism Vol. 16, pp. 1–13, From education to learning outcomes: How can academia show the evidence to stakeholders?
B., Kangumu	see C. C., Wolhuter
Barbara M., Kehm	Vol. 7, pp. 21–33, From government to governance: New mechanisms of steering higher education
Baris, Uslu	see Alper, Calikoglu
Bawool, Hong	see Kiyong, Byun
Bernard, Hugonnier	Vol. 13, pp. 43–56, Current and future trends in the world of universities Vol. 14, pp. 1–9, International student mobility: Limits of the current model
Braulio, Montiel	see Berríos, Paulina
Brian D., Denman	Vol. 10, pp. 81–102, Beyond the university: International university co-operation and network capital
Bryan, Penprase	Vol. 18, pp. 157–172, Global liberal arts and new institutions for 21st century higher education
Burton R., Clark	Vol. 2, pp. 1–17, Genetic entrepreneurialism among american universities
Byung Shik, Rhee	see Jung Cheol, Shin

C. C., Wolhuter	Vol. 6, pp. 59–72, The transformation of higher education in South Africa since 1994: Achievements and challenges Vol. 11, pp. 91–104, Higher education in Africa: Survey and assessment
Charas, Suwanwela	Vol. 5, pp. 11–24, Social responsibility of universities in Thailand
Chen, Wang	Vol.14, pp. 11–33, Criticisms of the university of Oxford in the early 19th century and the formation of Newman's idea of a university: Focusing on attacks in the Edinburgh review Vol. 18, pp. 141–156, Liberal education in the American context: Practical trends
Chi, Baik	see Emmaline, Bexley Vol. 15, pp. 91–103, The international student experience in Australian higher education: Ongoing challenges and emerging issues
Christel, Claussen	see Rómulo, Pinheiro
Christian, Schneijderberg	see Lars, Müller
Christopher D., Hammond	Vol. 19, pp. 87–107, Internationalization of curriculum in Japanese higher education: Blockers and enablers in English-medium instruction classrooms in the era of COVID-19
Chun-Mei, Zhao	Vol. 9, pp. 25–44, The international student density effect: A profile of a global movement of talent at a group of major U.S. universities
Claudio, Olea	see Berríos, Paulina
Darío, Díaz Muñoz	see Hernández Medina, Patricia
David A., Turner	Vol. 14, pp. 51–61, The place of higher education institutions: The dynamics of the local, national, and global
David D., Dill	Vol. 15, pp. 1–18, Market-based policies and higher education: Assuring and improving efficiency and academic quality in the university sector
David, Spendlove	Vol. 23, pp. 39–61, The Rhetoric of Research-Informed Teaching: Unpacking Ambitions and Assumptions in the UK's Teaching Excellence Framework
Don F., Westerheijden	Vol. 9, pp. 77–87, Towards a better ranking in higher education and research: Critique of global university rankings and an alternative
Dondulee, Jaisut	see Kiyong, Byun
Dongfang, Wang	Vol. 18, pp. 125–139, Best practices of liberal arts education: Curricula in liberal arts colleges
Douglas R., Gress	see Jung Cheol, Shin
Edgar Oswaldo, González-Bello	see Etty Haydeé, Estévez-Nenninger
Edith, Braun	see Kristina, Walz
Eko Hari, Purnomo	see Kiyong, Byun
Eleanor J., Dommett	see Julia, Ouzia
Elias, Pekkola	see Laila Nordstrand, Berg
Elizabeth M., Amukugo	Vol. 7, pp. 101–111, Access & quality dilemma in education: Implication for Namibia's Vision 2030
Elizabeth, Balbachevsky	Vol. 7, pp. 85–100, The graduate foundations of research in Brazil
Emmaline, Bexley	see Sophie, Arkoudis Vol. 8, pp. 61–74, Casual academics: Australia's hidden academic workforce
Estefanía, Álvarez	see Paulina, Berríos
Etty Haydeé, Estévez-Nenninger	Vol. 17, pp. 99–114, Teaching and research of academics in Mexico: Preferences and dedication according to the international survey APIKS
Eunyoung, Kim	see W. James, Jacob
F., Mungongi	see C. C., Wolhuter
Fabian, Pino	see Paulina, Berríos
Fabiola, Ramiro-Marentes	see Etty Haydeé, Estévez-Nenninger
Fatma Nevra, Seggie	see Alper, Calikoglu
Fazal, Rizvi	Vol. 23, pp. 1-16, Navigating the Politics of Disruptions in Higher Education
Fernanda, Aguilera	see Paulina, Berríos
Fumihiro, Maruyama	Vol. 5, pp. 99–111, The development and quality assurance of graduate education in Japan Vol. 7, pp. 53–67, Public expenditure on higher education in Japan

Futao, Huang	Vol. 2, pp. 115–129, A comparative study of massification of higher education in China and Japan Vol. 14, pp. 79–97, International academics in the Netherlands: Changes, characteristics and implications
Gareth, Williams	Vol. 4, pp. 61–72, Subject benchmarking in the UK
Gary, Rhoades	Vol. 5, pp. 37–54, Is academic capitalism, U.S. style, for Japan? Challenges, costs, choices
Gerard A., Postiglione	see Li-fang, Zhang
Germán, Álvarez-Mendiola	Vol. 12, pp. 1–21, The end of the boom: Private higher education in Mexico in the first decade of the 21st century
Gilbert N., Likando	see Elizabeth M., Amukugo
Giulio, Marini	Vol. 20, pp. 119–140, Striving to defend the academic profession: The university and college union in English research-intensive universities
Glen A., Jones	see Stephenson, Grace Karram Vol.16, pp. 15–26, Governing quality: The shifting role of the academic profession in decisions of academic quality and standards
Goolam, Mohamedbhai	Vol. 8, pp. 23–36, Higher education in Africa: The challenges ahead
Grace Karram, Stephenson	Vol. 17, pp. 22–41, Teaching, research and the Canadian professoriate: Findings from the 2018 APIKS survey
Grant, Harman	Vol. 1, pp. 117–134, Australia's system of quality assurance for higher education: Development, key elements and current operation
Gregory, Bianchi	see Arthur, Ellis
Gustavo, Gregorutti	see W. James, Jacob
Guy, Neave	Vol. 3, pp. 27–46, The evaluative state and Bologna: Old wine in new bottles or simply the ancient practice of 'coupage'?
Gwilym, Croucher	see Kennth, Moore
Haishao, Pang	Vol. 18, pp. 89–105, Historical development of the undergraduate educational model at BIT from the perspective of Suzhi education
Hamish, Coates	see Kenneth, Moore
Hanneke, Teekens	Vol. 10, pp. 23–34, Student mobility revisited
Hans, de Wit	see Lizhou, Wang
Hans, Schuetze	Vol. 5, pp. 113–124, Quality assurance for higher education in Canada: From patchwork to national policy
Heejin, Lim	see Jung Cheol, Shin
Helen, Carasso	see Roger, Brown
Hernández, Paublini	see Patricia, Hernández Medina
Hiroshi, Ota	Vol. 13, pp. 91–107, Measuring the accessibility of study in Japan utilizing international admissions procedures of English-taught degree programs
Hong, Shen	see Niamatullah, Baloch
Hugo, Horta	see Li-fang, Zhang
Hyejoo, Jung	see Soo Jeung, Lee
Hyunju, Lee	see Kiyong, Byun
Isak, Froumin	Vol. 12, pp. 77–94, National-regional relationships in rederal higher education systems: The case of Russian federation
Jacob, Mlynarski	see Jie, Ding
James A., Elwood	see Majid, Ghasemy
James H., Williams	Vol. 11, pp. 67–89, Higher education in Cambodia: Expansion and quality improvement
Jane, Knight	Vol. 6, pp. 19–32, The meaning and recognition of double and joint degree programs Vol. 19, pp. 1–19, Understanding and applying the key elements of knowledge diplomacy: The role of international higher education, research and innovation in international relations
Jang Wan, Ko	see Jung Cheol, Shin
Javier, Fuentes	see Paulina, Berríos
Jessica, Murray	Vol. 22, pp. 99–125, Workload allocation and postgraduate research supervision: From praxis to theory development

Jesús F., Galaz-Fontes	Vol. 6, pp. 87–101, Mexican higher education at a crossroads: Topics for a new agenda in public policies
Jie, Ding	Vol. 23, pp. 183-207, Reconsidering Internationalisation: Navigating the challenges of Chinese private higher education institutions
Jieqiong, Ding	see Xinyi, Xie
Jinghuan, Shi	Vol. 10, pp. 51–70, "Why" and "how" matter: Student engagement in China's universities
Jisun, Jung	see Li-fang, Zhang
Johannes, Balve	Vol. 11, pp. 1–9, Higher education and demographic challenge: The German case
John, Douglass	see Chun-Mei, Zhao
John, Mushaandja	see Elizabeth M., Amukugo
Jorge G., Martínez-Stack	see Jesús F., Galaz-Fontes
José L., Arcos-Vega	see Jesús F., Galaz-Fontes & Etty Haydeé, Estévez-Nenninger
Juan J., Sevilla-García	see Jesús F., Galaz-Fontes
Juan José, Ramírez Bonilla	see Sylvie, Didou Aupetit
Julia, Ouzia	Vol. 20, pp. 1–21, COVID–19 and loneliness in higher education: A UK-based cohort comparison study
Julien, Calmand	Vol. 15, pp. 63–77, French PhDs employed in the private sector: The signal effect of chaotic pathways
Jung Cheol, Shin	see Soo Jeung, Lee Vol. 11, pp. 37–52, Higher education governance under neoliberalism Vol. 16, pp. 27–43, Reforming doctoral education for the knowledge society: A competency development perspective Vol. 21, pp. 1–26, International faculty members' intention to leave South Korea: Do acculturation and cultural advantage matter? Vol. 23, pp. 17-38, Leadership Competency, Styles and Contexts of Higher Education Institutions in Korea and Taiwan
Jung-Cheng Robin, Chen	see Jung Cheol, Shin
Jürgen, Enders	Vol. 4, pp. 19–31, Reform and change of German research universities
Jussi, Välimaa	Vol. 6, pp. 73–86, On field knowledge in higher education research
K. M., Joshi	Vol. 13, pp. 57–74, Higher education growth in India: Is growth appreciable and comparable?
Kaiyun, Feng	Vol.22, pp. 43–68, Balancing academic and managerial logics: The unintended effects on promoting undergraduate teaching and learning
Kana, Yoshida	see Xian, Chen
Karen, Gutiérrez	see Paulina, Berríos
Kathy, Shoop	see Arthur, Ellis
Kay, Harman	Vol. 5, pp. 79–98, The research training mission of the university: Challenges to traditional systems of doctoral education
Keiko, Yokoyama	Vol. 3, pp. 89–100, Ideology and higher education studies in Japan and the UK: Theoretico-methodological issues
Keith J., Morgan	Vol. 1, pp. 99–115, Higher education in England in the 21st century Vol. 2, pp. 141–156, Teaching, scholarship and research: An undistributed middle Vol. 5, pp. 55–77, Problems with the academy: Markets and massification
Kelly O., Byrd	see Rebecca M., Giles
Kelly, Farrell	see Keri-Lee, Harris
Kelsey, Inouye	see Yangson, Kim
Keng C., Sopcheak	see James H., Williams
Kenneth, Moore	Vol.16, pp. 69–84, Measuring international higher education productivity: Lessons from nine countries in Asia
Keri Ka-Yee, Wong	see Julia, Ouzia
Kerri-Lee, Harris	Vol. 4, pp. 47–59, Measuring the quality of university teaching: The Australian experience of performance indicators for teaching
Kinjal V., Ahir	see K.M., Joshi & Vishakha, Gandhi
Kiyomi, Horiuchi	see Hiroshi, Ota

Kiyong, Byun	see Jung Cheol, Shin Vol. 21, pp. 115–139, The way forward for ASEAN students' exchange program participation with South Korean universities after the COVID-19 pandemic: Focusing on the needs of non-participating students
Kristina, Walz	Vol. 19, pp. 45–69, A competency level model for communication skills
Laila Nordstrand, Berg	Vol. 19, pp. 175–195, At the top of the pyramid, everyone is above average: Self-efficacy and perceived performance of academics in the Nordic countries
Lap, Ngo Tu	see Kiyong, Byun
Lara, Haro Diego	see Patricia, Hernández Medina
Lars, Geschwind	see Laila Nordstrand, Berg
Lars, Müller	Vol. 17, pp. 43–68, The emergence of the organizational academic profession: Vertical differentiation of German universities and the research-teaching nexus
Laura E., Padilla-González	see Jesús F., Galaz-Fontes
Laura Edith, Gutiérrez-Franco	see Etty Haydeé, Estévez-Nenninger
Leping, Mou	Vol. 18, pp. 73–88, A comparative analysis of liberal arts models in three institutions from mainland China, Hong Kong, and Taiwan
Leslie, Quiroz-Schulz	Vol. 21, pp. 181–199, Professional learning derived from international academic mobility during PhD programs
Leyla, Radjai	see Christopher D., Hammond
Li-fang, Zhang	Vol.17, pp. 69–97, The research-teaching nexus: Not merely an enduring myth
Lisa R., Lattuca	Vol. 9, pp. 61–75, Promoting interdisciplinary doctoral education: Expectations and opportunities
Liusi, Guan	see Jinghuan, Shi
Lizhou, Wang	Vol. 23, pp. 63-80, Geopolitics and International Higher Education: Concepts, knowledge diplomacy and security policies, and future agenda
Louise, Morley	Vol. 8, pp. 75–91, Employability, equity and elite formation
Luc E., Weber	Vol. 1, pp. 19–32, Main issues in European higher education and research
M. K., Tadjudin	Vol. 4, pp. 73–77, The role of Islamic higher education in Indonesia in modernization of Islamic thinking in Indonesia
Majid, Ghasemy	Vol. 20, pp. 79–103, A Comparative study on the education for sustainability (EfS) skills and in-role performance effectiveness in the context of the Malaysian and the Japanese academic ecosystems
Manja, Klemenčič	Vol. 13, pp. 75–90, Intergovernmental regional cooperation in European higher education
Manuel, Gil-Antón	see Jesús F., Galaz-Fontes
Maoyuan, Pan	Vol. 5, pp. 1–9, Development and problems: Higher education research in China at the beginning of the 21st century
Marcelo, Robaldo	see Paulina, Berríos
Marek, Kwiek	Vol. 8, pp. 37–59, The public/private dynamics in Polish higher education: Demand-absorbing private growth and its implications
Maresi, Nerad	Vol. 7, pp. 69–84, Increase in PhD production and reform of doctoral education worldwide
Mariana, Mandonça	see Mónica, Marquina
Martin J., Finkelstein	see Jacob, W. James Vol. 3, pp. 67–76, The revolution in faculty appointments in the United States. What has it meant for academic careers? And what might it mean for Japan?
Mary, Henkel	Vol. 4, pp. 33–45, Academic boundaries: Are they still needed?
Mei, Wu	Vol. 12, pp. 23–35, Cross-border higher education institutions in mainland China: A developmental perspective
Mesfin Molla, Demissie	Vol. 20, pp. 157–177, Economic benefits of higher education in Ethiopia: A benefit-cost ratio analysis
Michael Anthony, Samuel	Vol. 13, pp. 1–23, Values and purposes of a PhD: Comparative responses from South Africa and Mauritius
Michael H., Lee	Vol. 4, pp. 87–112, Internationalizing university education in Singapore: Future directions

Michael W., Klein	Vol. 12, pp. 57–76, What counts: The policy and politics of the proposed college rating system in the United States
Michael, Asante	see Aleksandar, Avramovic
Michael, Shattock	Vol. 3, pp. 47–65, Modern academic governance
Min, Liu	see Chen, Wang
Ming, Li	see Ariunaa, Enkhtur Vol.22, pp. 125–146, Impact of the Covid pandemic on Asian graduate students in Japan: Lessons learned and future recommendations for student support
Mir Dosteen, Hoth	see Niamatullah, Baloch
Mohamad Azhari, Karim	see Morshidi, Sirat
Mónica, Marquina	Vol. 8, pp. 93–105, Higher education reform in Argentina in the 1990s: Paradoxes of government intervention in a minimalist state model Vol. 21, pp. 27–50, Working conditions in Argentina's academia: Different career paths and fragmentation of the profession
Morshidi, Sirat	Vol. 5, pp. 25–35, Scenario-building approach to constructing models for universities in Malaysia
Motohisa, Kaneko	Vol. 11, pp. 21–35, Undergraduate education in Japan: Observations from student and faculty surveys
N.V., Varghese	Vol. 9, pp. 45–59, Higher education reforms and revitalization of the sector
Nabil, Bouzid	Vol. 10, pp. 103–119, Higher education in Algeria: Evolution and perspectives
Naomi, Matsubara	Vol. 14, pp. 63–77, Secondary school pupils' achievements for success in university admissions: How a British secondary school evaluates pupils to expand their career path?
Neil, Dunstan	see Brian D., Denman
Nena, Rončević	see Alenka, Flander
Nga Thi Tuyet, Phan	Vol. 23, pp. 81–105, A Mixed-Methods Study of the Impact of Self-Efficacy on Self-Regulated Learning Strategies among Vietnamese Undergraduates Enrolled in a Research Methods Course
Niamatullah, Baloch	Vol. 18, pp. 23–46, Faculty publication productivity and collaboration in Pakistan: Using mixed methods to compare foreign and domestic doctoral degree holders
Nian Cai, Liu	see Qiaoqiao, Deng
Nicolás, Reznik	see Mónica, Marquina
Noboru, Miyoshi	see Qiujing, Pan Vol. 16, pp. 97–112, Research on international students' mobility and their satisfaction in Japanese universities: A comparison of Chinese and American students Vol. 18, pp. 1–22, Study abroad decision-making of Chinese international students: The role of universities' international environment and overseas publicity Vol. 19, pp. 71–86, The effect of class experiences via online education on Japanese university students' learning outcomes amid the COVID-19 pandemic Vol. 20, pp. 41–58, Relationship between learning engagement and learning outcomes in online education during the COVID-19 pandemic: A semi-structured interview
Nordiana Mohd, Nordin	see Kiyong, Byun
Norzaini, Azman	see Morshidi, Sirat
Oleg, Leshukov	see Isak, Froumin
Olga, Bain	see W. James, Jacob
Olga, Grijalva Martínez	see Wietse, De Vries
Olivier, Bégin-Caouette	see Grace Karram, Stephenson
Paige, Vitulli	see Rebecca M., Giles
Patricia, Hernández Medina	Vol. 21, pp. 51–74, Preferences for study modalities based on the experience of e-learning in pandemics Vol. 23, pp. 159-182, Intention to Adopt Distance Education Mediated by Satisfaction: Structural equation modelling in Ecuadorian universities
Paulina, Berríos	Vol. 19, pp. 155–174, Academic profession and gender among academics in formative stages: International trends and successful public university strategies
Peter, Maassen	Vol. 1, pp. 55–64, Higher education reform and the public legitimacy debate

Peter, Tremp	Vol. 12, pp. 37–55, Enhancing flexibility: Ten years of experience with new academic structures in Swiss universities
Philip G., Altbach	Vol. 1, pp. 1–17, Centers and peripheries in the academic profession: The special challenges of developing countries
Qi, Wang	see Qiaoqiao, Deng
Qiaoqiao, Deng	Vol. 7, pp. 35–51, National initiatives for building world-class universities: Comparison between Asian and European experiences
Qing, Wang	see Haishao, Pang
Qiujing, Pan	see Noboru, Miyoshi Vol. 20, pp. 23–40, Undergraduate Students' Learning Outside of Class Time During the COVID-19 Pandemic in Japan: The impact of online education
Rahmad, Hidayat	Vol.22, pp. 69–97, A systematic literature review of prior studies on the Indonesian independent campus policy (2020–2023)
Rajeev, Kumaramkandath	Vol. 21, pp. 201–221, Death of vernaculars and language hegemony: An ethnography of higher education sector in 21st century India
Ratna, Ghosh	Vol. 10, pp. 35–49, Diversity and quality in higher education: A comparison of preferential policies in India and the U.S.
Rayburn, Barton	Vol. 7, pp. 113–125, The American economic recovery and reinvestment act of 2009: Impact on state higher education policy
Rebecca M., Giles	Vol. 21, pp. 75–92, Online learning post-COVID: Faculty caring in the eyes of university students
Reiko, Yamada	Vol. 5, pp. 125–140, Learning outcomes of college students in Japan: Comparative analysis between and within universities Vol. 15, pp. 19–37, Impact of higher education policy on private universities in Japan: Analysis of governance and educational reform through survey responses
Richard, James	see Harris, Kerri-Lee & Arkoudis, Sophie
Robert W., Aspinall	Vol. 15, pp. 79–90, Limits to the internationalisation of higher education in Island nations: Nationalism and foreign language education policy in universities in Japan and England
Robert, Birnbaum	Vol. 2, pp. 71–91, Professor and sensei: The construction of faculty roles in the United States and Japan
Roger L., Geiger	Vol. 3, pp. 77–87, Doctoral education in the United States, past and present, and the key role of chemistry Vol. 10, pp. 1–21, Postmortem for the current era: Change in American higher education, 1980–2010
Roger, Brown	Vol. 9, pp. 1–15, Everything for sale? The marketisation of UK higher education 1980–2012 Vol. 11, pp. 11–20, Implications of the United Kingdom's market-based reforms
Rómulo, Pinheiro	see Avramovic, Aleksandar & Berg, Laila Nordstrand; Vol. 22, pp. 17–42, Hybrid decision structures in transnational alliances of higher education
Rui, Bao	see Haishao, Pang
Rui, Yang	see Warangkana, Lin
S., Gopinathan	see Michael H., Lee
Sainbayar, Gundsambuu	Vol. 19, pp. 21–43, English medium instruction programs in private universities in Mongolia: Rationales and challenges
Sayed Shafiullah, Obaidi	see Sayeed Naqibullah, Orfan
Sayeed Naqibullah, Orfan	Vol. 21, pp. 141–160, Faculty members' experience of student incivility in public institutions of higher education: A case study of a conflict-stricken country
Sebastian, Kočar	see Alenka, Flander
Seng Chee, Tan	Vol. 11, pp. 53–65, Using technologies for knowledge creation in higher education
Shengbing, Li	see Mei, Wu Vol. 6, pp. 49–57, Transnational higher education in China: Thirty years of development
Shi Huei Sophia, Ho	see Jung Cheol, Shin

Shinichi, Yamamoto	Vol. 1, pp. 65–69, The higher education system in Japan: The role of government since 1945 Vol. 4, pp. 79–85, The incorporation of national universities and its impact on higher education in Japan Vol. 9, pp. 17–24, University reform now in Japan: From a screening device toward a place of teaching and learning
Shu, Wang	see Jinghuan, Shi
Siming, Luo	see Niamatullah, Baloch
Simon, Marginson	Vol. 7, pp. 1–19, The limits of market reform in higher education
Simon, Schwartzman	see Elizabeth, Balbachevsky
Solomon Arulraj, David	Vol. 20, pp. 141–156, Impacts of internationalisation for quality assurance: A case study on institutional best practices for quality assurance in a research university
Soo Jeung, Lee	Vol. 17, pp. 207–223, Changes in academics' identity, job satisfaction, and job stress between 1992 and 2018 in South Korea
Sophie, Arkoudis	Vol. 9, pp. 89–103, Addressing the challenge of maintaining the Australian academic workforce
Soubin, Sisavath	Vol. 21, pp. 161–180, Internationalization of higher rducation in Laos: Perspectives of university staff on rationales, challenges and strategies for the post-COVID-19
Stefan, Gänzle	see Pinheiro, Rómulo
Stefano, Boffo	Vol. 16, pp. 125–142, University fourth mission, spin-offs and academic entrepreneurship: Connecting public policies with new missions and management issues of universities
Susan, Ferguson	see Giles, Rebecca M.
Sylvie, Didou Aupetit	Vol. 16, pp. 113–124, Bureaucracy and internationalization in higher education in Mexico: Fatal impacts Vol. 21, pp. 93–114, Mexico-Japan technical and academic exchange program in transition: Challenges and issues of interculturality
Takahiko, Nakaseko	see Noboru, Miyoshi
Takuya, Kimura	see Noboru, Miyoshi
Tennyson, Mgutshini	see Jessica, Murray
Thomas, Hildbrand	see Peter, Tremp
Tomoko, Torii	Vol. 14, pp. 35–49, Achieving evidence-based improvement and transparency in higher education: The current status and challenges regarding data utilization and disclosure in Japan
Tomotaka, Hirao	Vol. 20, pp. 105–118, Effects of graduate education on initial employment: Evidence from new graduates in the Japanese labor market Vol. 23, pp. 107-130, Unraveling the New Factors Influencing Public Pension Knowledge: Findings from Japanese university students
Ulrich, Teichler	Vol. 1, pp. 33–53, Mutual recognition and credit transfer in Europe: Experiences and problems Vol. 2, pp. 35–54, Towards a "European higher education area": Visions and realities
V. Lynn, Meek	Vol. 2, pp. 19–34, The demise of public good in the neo-liberal coordination of higher education: The case of Australia
Vishakha, Gandhi	Vol. 19, pp. 197–216, Private financing and access to higher education in India during 2010 to 2020
W. James, Jacob	Vol. 17, pp. 135–150, Preferences of U.S. faculty members regarding the teaching-research nexus
Wang, Chen	Vol.14, pp. 11–33, Criticisms of the University of Oxford in the early 19th century and the formation of Newman's idea of a university: Focusing on attacks in the Edinburgh Review
Warangkana, Lin	Vol. 16, pp. 143–159, To borrow or to mix? A cultural approach to observing Taiwan's higher education Vol. 19, pp. 109–129, A hidden cultural force: Contextualizing Taiwan's higher education governance

Wenqin, Shen	see Xinyi, Xie, Vol. 13, pp. 25–42, Liberal education traditions in the United Kingdom and United States: An historical perspective
Wietse, De Vries	Vol. 16, pp. 45–68, Performance, productivity and the diversity of student pathways
William G., Tierney	Vol. 6, pp. 1–17, Globalization, international rankings, and the American model: A reassessment
William K., Cummings	see W. James, Jacob Vol. 3, pp. 1–25, Globalization and knowledge production: An Asian tilt?
William, Locke	Vol. 6, pp. 33–47, Intermediary bodies in UK higher education governance, with particular reference to universities UK
Xian, Chen	Vol. 23, pp. 131-157, Study Motivations, Academic Experiences, and Career Aspirations of International Students in China
Xiaoqiang, Lui	see Maoyuan, Pan
Xinyi, Xie	Vol. 18, pp. 107–124, Undergraduates' self-reported learning outcomes of general education courses: A case study of a Chinese elite university
Xixi, Zhang	see Ariunaa, Enkhtur
Xuefei, Chen	Vol. 1, pp. 89–97, Re-construction and expectations of the higher education system: A study on the reform of the administrative system for higher education in China since 1990
Yangson, Kim	Vol. 18, pp. 47–68, The institutionalization of neoliberal ideas in the management and evaluation of higher education in Korea and Japan; Vol. 22, pp. 147–168, The value of the Ph.D. in the nested contexts of Japanese society: From the perspectives of doctoral students
Yasi, Xu	see Dongfang, Wang
Yezhu, Zhao	Vol. 2, pp. 131–139, Female access to higher education in China since the 1990s: Process, problem and prospect
Yonghong, Hu	see Noboru, Miyoshi
Youcef, Berkane	see Nabil, Bouzid
Yuji, Okada	see Tomoko, Torii
Yukako, Yonezawa	Vol. 15, pp. 39–62, Management of internationalization in Japanese universities: Towards the development of collaborative relationship between academic and administrative staff
Yukari, Matsuzuka	Vol. 10, pp. 71–80, Horizontal and vertical differentiation in the global market for higher education: An economic perspective Vol. 17, pp. 1–20, Validity of outcome-oriented, competency-based education in the age of global student mobility: Implications from an EU-Japan comparative study on competencies expected of university graduates
Yunshan, Liu	see Xinyi, Xie
Yuto, Kitamura	see James H., Williams
Zineddine, Berrouche	see Nabil, Bouzid

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Contents

Navigating the Politics of Disruptions in Higher Education
Fazal Rizvi ····· 1

Leadership Competency, Styles and Contexts of Higher Education Institutions in Korea and Taiwan
Jung Cheol Shin, Robin Jung-Cheng Chen and Sophia Shi-Huei Ho ····· 17

The Rhetoric of Research-Informed Teaching: Unpacking ambitions and assumptions in the UK's teaching excellence framework
David Spendlove ····· 39

Geopolitics and International Higher Education: Concepts, knowledge diplomacy and security policies, and future agenda
Lizhou Wang and Hans de Wit ····· 63

A Mixed-Methods Study of the Impact of Self-Efficacy on Self-Regulated Learning Strategies among Vietnamese Undergraduates Enrolled in a Research Methods Course
Nga Thi Tuyet Phan ····· 81

Unraveling the New Factors Influencing Public Pension Knowledge: Findings from Japanese university students
Tomotaka Hirao ····· 107

Study Motivations, Academic Experiences, and Career Aspirations of International Students in China
Xian Chen and Kana Yoshida ····· 131

Intention to Adopt Distance Education Mediated by Satisfaction: Structural equation modelling in Ecuadorian universities
Patricia Hernández-Medina, Diego Lara-Haro, Darío Díaz-Muñoz and María Paublini- Hernández ····· 159

Reconsidering Internationalisation: Navigating the challenges of Chinese private higher education institutions
Jie Ding and Jacob Mlynarski ····· 183

Cumulative Author Index, Vol. 1-23 ····· 209

ISBN978-4-86637-057-6