

## **The role of higher education in sustainable national development: Reflections from an international perspective**

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**Abstract:** Education as initiation is a profound concept that suggests education transcends the mere transmission of knowledge. It emphasizes the role of education in guiding students into deeper understandings of the world, culture, values, and ways of thinking, and advancing sustainable national development for a country. Higher education plays a pivotal role in advancing sustainable national development, with its impacts and challenges intricately shaped by the political, economic, and cultural contexts of individual nations. This article advocates for a balanced approach that protects local knowledge systems and cultural traditions amidst the forces of globalization, ensuring that higher education remains inclusive, equitable, and responsive to evolving global dynamics. It examines the multifaceted contributions of higher education to sustainable development across four critical dimensions: (1) promoting economic development and innovation-driven growth for a nation, (2) enhancing social mobility and equity for a nation, (3) fostering culture and global competitiveness for a nation, and (4) promoting academic freedom for a nation. The article argues that higher education can serve as a transformative force—not only driving economic advancement but also fostering cultural continuity and enhancing social cohesion—thereby contributing holistically to sustainable national development.

**Keywords:** *Higher education institutions (HEI), Higher education, Sustainable national development.*

### **1. Introduction**

"Education as initiation" is a profound concept that suggests education transcends the mere transmission of knowledge. It emphasizes the role of education in guiding students into deeper understandings of the world, culture, values, and ways of thinking. This perspective is often rooted in philosophical traditions that view education as a transformative process, one that leads learners to a new mode of perceiving and engaging with life. Rather than simply preparing students for practical tasks or fostering rote memorization, this approach envisions education as a journey toward intellectual and personal growth. Hence, education is crucial for individual development because it not only imparts knowledge but also fosters the development of cognitive abilities, emotional growth, and social adaptability. The implementation of education affects a country's development and success [1, 2].

Especially, higher education is inextricably linked to political, economic, and cultural systems, functioning as a pivotal driver of social transformation. Enduring and substantive social change seldom transpires in the absence of a robust and responsive higher education sector. Especially, in contemporary society, declining birth rates have become a significant issue commonly faced by most developed countries around the world. Especially in the field of higher education, many nations are grappling with challenges such as insufficient student enrollment, school mergers, and adjustments in teaching staff, highlighting the profound impact of low birth rates on the educational system.

Consequently, reforms in higher education must extend beyond the pursuit of academic excellence to encompass the comprehensive development of students. This entails the cultivation of humanistic values, the preparation of individuals for meaningful and socially relevant careers, and the fostering of civic engagement and responsibility. Ultimately, higher education should empower learners to translate their knowledge and competencies into actions that contribute to the advancement of society, thereby aligning personal growth with collective progress [3-6].

The implementation of education affects a nation's development and success, and education is a catalyst for personal development and a powerful tool for global change. Especially, higher education is widely acknowledged as a cornerstone of national development. It not only contributes to economic growth by producing a highly skilled labor force but also plays a central role in advancing technological innovation, facilitating social mobility, enhancing cultural influence, and bolstering a nation's global competitiveness. However, the trajectories and challenges of higher education systems differ substantially across nations, leading to varying impacts on national development. This article seeks to critically analyze the multifaceted roles and effects of higher education within the economic, social, cultural, and policy domains from an international perspective in a country [2, 7].

## **2. Rethinking the Role of Higher Education in Sustainable National Development: An International Perspective**

Contemporary society is undergoing a profound and multifaceted transformation, characterized by the emergence of the knowledge economy, globalization, new forms of employment, demographic aging, migration, family restructuring, the multimedia revolution, and the rise of consumerism. In response to these sweeping changes, there is an urgent need for a more responsive and equitable approach to education and lifelong learning. Simultaneously, influenced by the global trend of prioritizing knowledge-based development, knowledge workers are anticipated to become central to the future social and economic landscape. It is widely expected that knowledge-intensive work will play a critical role in the labor market. To effectively navigate and contribute to the evolving knowledge economy, individuals must actively engage in continuous learning to update and expand their professional expertise [8]. The cultivation of such knowledge workers relies fundamentally on the advancement and responsiveness of higher education systems. From an international perspective, higher education plays a multifaceted role in shaping a nation's economic, social, cultural, and policy development.

### *2.1. Promoting Economic Development and Innovation-Driven Growth for a Nation*

Current demographic trends are subject to considerable variation from country to country. While some countries face a continuous rise in university-age student cohorts, others are experiencing declining student populations due to ageing societies. These dynamics will have a substantial impact on the future landscape of higher education [9]. Furthermore, the widespread expansion of higher education aligns with UNESCO's goal of promoting inclusive and equitable quality education, contributing to the achievement of the fourth Sustainable Development Goal (SDG). Examining the impact of higher education expansion on economic growth is a crucial area of inquiry. The contribution of higher education to economic development is primarily reflected in talent cultivation and technological innovation. In other words, higher education fuels economic growth by producing a skilled labor force, driving research and innovation, and supporting knowledge-based industries. Universities and colleges serve as engines of economic transformation by aligning education with national development goals. In addition, Higher Education Institutions (HEI) hold a crucial position in collaboration with all stakeholders. Research universities in the United States and Europe, such as the Massachusetts Institute of Technology (MIT) and the University of Cambridge, play a crucial role in technology transfer and entrepreneurial ecosystems. These institutions not only nurture innovative talent but also collaborate with businesses to facilitate the commercialization of new technologies. For example, the development of Silicon Valley in US heavily relies on Stanford University's innovation and startup incubation capabilities. Additionally, in Asia, initiatives such as

China's "Double First-Class" program and Singapore's university R&D policies demonstrate how governments leverage higher education to drive technological advancement and enhance international competitiveness [10, 11].

### *2.2. Enhancing Social Mobility and Equity for A Nation*

Higher Education Institutions (HEIs) have a unique role and responsibility for the future and for driving the development of a sustainable society, and enhance social mobility and equity for a nation. Social mobility refers to how a person's socio-economic situation improves or declines relative to that of their parents or throughout their lifetime. It can be measured in terms of earnings, income, social class, and well-being dimensions such as health and education. Promoting social mobility benefits individuals, the economy, and social cohesion [12]. Higher education is widely regarded as a critical mechanism for facilitating social mobility, yet debates persist regarding its true capacity to achieve equity. In Nordic countries such as Norway and Finland, governments provide free or low-cost higher education, thereby ensuring equitable access to learning opportunities for students across various socio-economic backgrounds. In contrast, the United States and the United Kingdom face significant challenges related to exorbitant tuition fees and student loan burdens, which exacerbate educational inequalities and create barriers for students from low-income families to gain admission to prestigious universities. Furthermore, while developing countries continue to expand higher education, they also encounter substantial challenges in maintaining quality control. For instance, in Taiwan, the demographic shift resulting from a declining birth rate has placed considerable strain on many private universities, leading some institutions to close due to financial instability and dwindling enrollment [13-15].

### *2.3. Fostering Culture and Global Competitiveness for a Nation*

One of the key objectives of advancing the internationalization of education is to critically engage with the challenges posed by globalization, cultivate students' awareness of global interconnectivity, and enhance their understanding of cross-cultural dynamics. This, in turn, fosters the development of systematic critical thinking skills. In the era of globalization, higher education institutions function not only as centers of knowledge production but also as crucial sites for cultural exchange and global influence. Universities in English-speaking countries, such as Harvard in the United States and Oxford in the United Kingdom, exert significant global influence, attracting scholars and students from diverse backgrounds and shaping the structures of global knowledge production. However, globalization also entails the risk of cultural homogenization, whereby the knowledge systems and cultural values of non-English-speaking regions may become marginalized within dominant academic discourses. In response, various countries have undertaken initiatives aimed at localizing and decolonizing their education systems. Notable examples include: (1) South Africa's Decolonization of Higher Education: In recent years, South African universities have actively engaged in curriculum decolonization, critically reassessing curricula predominantly centered on Western epistemologies and integrating indigenous knowledge systems, including Ubuntu philosophy, as part of a broader effort to challenge colonial legacies in education. (2) India's Ministry of Human Resource Development [16]: This policy foregrounds multilingual education and advocates for the incorporation of indigenous research traditions and classical knowledge systems—such as Vedic mathematics and Ayurveda—into mainstream academic frameworks. (3) Taiwan's Negotiation Between Localization and Bilingual Education: As Taiwan advances its bilingual education policies, an important consideration is how to safeguard and promote local academic traditions and cultural epistemologies, ensuring they are not rendered peripheral within the broader process of educational internationalization. (4) In Singapore, the mother tongue education component of Singapore's bilingual policy aims at achieving a dual goal of empowering its citizens with linguistic capital. Mother tongue learning is closely connected to cultural learning. Although young children already have some awareness of their ethnic group and its culture. By learning about the cultural traditions and customs in their surroundings, children can develop a positive sense of identity. These initiatives underscore the complexities of balancing the imperatives of

globalization with the imperative to sustain and legitimize diverse epistemological traditions, ultimately contributing to a more inclusive and pluralistic global academic landscape [15, 17-21].

#### *2.4. Promoting Academic Freedom for a Nation*

In Europe and across the globe, academic freedom – and its close relative, institutional autonomy – find themselves increasingly under pressure. For the European University Association, it is essential to support universities as central actors in the protection and promotion of academic freedom. Academic freedom constitutes a fundamental principle in higher education, ensuring that faculty, researchers, and students possess the autonomy to engage in teaching, research, and intellectual inquiry without undue external interference or institutional constraints. This principle underpins the unrestricted pursuit of knowledge, allowing scholars to critically examine prevailing paradigms, explore contentious issues, and disseminate findings without fear of censorship or retribution. By fostering an environment conducive to critical thinking, innovation, and intellectual pluralism, academic freedom not only enriches scholarly discourse but also plays a pivotal role in shaping public debate and driving societal progress. Higher education institutional and policy dynamics differ across time, but also between countries and political regimes and therefore context cannot be neglected. Higher education not only has a profound impact on the economy and culture but also plays a crucial role in democratic development and public policy-making. In liberal democracies, academic freedom allows scholars to conduct independent research and critically analyze public policies. For example, academic institutions in Germany and Canada actively engage in research and advocacy on issues such as climate change and human rights, driving policy reforms and social progress. In contrast, in certain authoritarian countries like North Korea and Russia, higher education institutions are strictly controlled by the government, and academic freedom is severely restricted, affecting knowledge production and international academic collaboration. This contrast highlights the differences in knowledge creation and policy influence among higher education institutions under different governance models [22-24].

### **3. Reflections**

Throughout human history, education has been an indispensable mechanism for the transmission of knowledge and the preservation of cultural and historical heritage. As a foundational pillar of human development, higher education plays a vital role in shaping individuals and societies. Consequently, nations across the globe have consistently pursued educational reforms aimed at enhancing the quality, accessibility, and effectiveness of their higher education [25]. A critical reflection on higher education can be undertaken from the following key dimensions:

#### *3.1. Reflections on Economic Development and Innovation-Driven Growth*

Tertiary education refers to all formal post-secondary education, including public and private universities, colleges, technical training institutes, and vocational schools. Tertiary education is instrumental in fostering growth, reducing poverty, and boosting shared prosperity. A highly skilled workforce, with lifelong access to a solid post-secondary education, is a prerequisite for innovation and growth: well-educated people are more employable and productive, earn higher wages, and cope with economic shocks better. Tertiary education benefits not just the individual, but society as a whole. Higher education fuels economic growth by producing a skilled labor force, driving research and innovation, and supporting knowledge-based industries. Universities and colleges serve as engines of economic transformation by aligning education with national development goals. Key points can develop: (1) Human capital development: How higher education equips individuals with the skills and knowledge needed for high-value sectors. (2) Research and innovation ecosystems: Role of universities in scientific research, technology transfer, and entrepreneurial ecosystems (e.g., university-based incubators). (3) Industry-academia linkages: Partnerships between higher education institutions and industries to align curricula with labor market needs. (4) Regional and national impact: Case studies (e.g., Taiwan's high-tech sector growth linked to institutions like NTU and Hsinchu Science Park [15,

26, 27].

### 3.2. Reflections on Social Mobility and Equity

School education must incorporate social issues into teaching to effectively address the diverse developmental needs of individual students. Social justice is one of contemporary society's most complex, broad, and mediating social-political concepts and issues. Social justice hinges on equality, equity, diversity, fairness, and human rights. Higher education serves as a critical mechanism for reducing social inequalities and facilitating upward social mobility, particularly among marginalized and historically underrepresented groups. By expanding educational opportunities, higher education systems can foster more inclusive and equitable societies. Several key dimensions illustrate this transformative potential. Key points can develop: (1) Access and inclusion: Policy interventions that promote equitable access to higher education—particularly for low-income, rural, indigenous, and minority populations—are essential for addressing structural barriers and widening participation. (2) Affordability and financial support: The provision of scholarships, grants, and tuition subsidies plays a vital role in ensuring that financial constraints do not hinder capable students from pursuing tertiary education. (3) Lifelong learning: Universities contribute to inclusive development by offering continuing education, professional development, and reskilling programs, thereby supporting individuals throughout various stages of life and career transitions. (4) Gender equity and social justice: Higher education institutions possess the capacity to challenge entrenched social norms and contribute to broader societal transformation by promoting gender equality and embedding principles of social justice within curricula and institutional practices [14, 28-30].

### 3.3. Reflections on Cultural Preservation and Global Competitiveness

Higher education has a unique capacity to both embrace global trends and foster local cultural preservation. As globalization pushes for more standardization, universities can play a crucial role in safeguarding local languages, histories, and identities by incorporating indigenous knowledge systems, supporting local languages in curricula, and promoting the exploration of regional histories and cultural practices. Through research, cultural programs, and educational policies, universities can act as repositories of local heritage and foster environments where students develop an understanding of their own cultural contexts while simultaneously engaging with global ideas. In this way, higher education can offer a platform for dialogue between local traditions and global discourses, ensuring that cultural diversity is celebrated and maintained. Key points can develop: (1) Curriculum localization: Including indigenous knowledge, cultural studies, and national histories within university curricula. (2) Multilingual and multicultural education: Supporting cultural diversity and inclusion through language and intercultural education. (3) Global rankings vs. local relevance: Tension between international competitiveness and responsiveness to local needs. (4) Cultural diplomacy: How universities serve as bridges between cultures and promote soft power. For example, African universities promoting decolonized curricula. In South Africa, the curriculum and calls for free higher education became the slogans and demands contemporaneous to the time. The #FeesMustFall (FMF) demands to decolonise the curriculum [31].

### 3.4. Reflections on Academic Freedom

Maintaining academic freedom in the face of new and emerging threats requires vigilance and mechanisms appropriate to an age of global science and connectivity. It also requires an understanding of the fundamental interconnectedness between academic freedom. However, some countries are facing challenges to academic freedom. For example, the challenge of academic freedom at post-Soviet universities. Academic freedom underpins the role of universities in democratic societies by safeguarding the right to pursue knowledge without censorship or political interference. This freedom empowers scholars to engage in critical inquiry, generate independent research, and contribute to evidence-based policymaking. Because scholars can be subjected to academic, intellectual, or political

repression. Moreover, it fosters civic engagement by equipping students and the public with the tools to question dominant narratives, participate in informed debate, and strengthen democratic institutions. Key points can develop: (1) Autonomy and governance: Need for institutional independence from political interference. (2) Policy engagement: How academic research informs and shapes national development strategies (e.g., health, environment, education). (3) Freedom of thought: Ensuring that diverse viewpoints can be expressed and debated without fear of repression. (4) Higher education as a public good: Framing higher education not only as a private investment but as essential for public welfare and democratic life [32-34].

#### 4. Conclusions

An increasing number of universities are strategically aligning their curricula and research priorities with the United Nations Sustainable Development Goals (SDGs), thereby making significant contributions to global sustainability initiatives and enhancing student awareness of critical international sustainability challenges [35]. This article offers a comprehensive reflection on the multifaceted role of higher education in sustainable national development from an international perspective, and enhances the sustainability in higher education (SHE). The article introduces the critical role higher education plays in sustainable national development, highlighting its impact on economic growth, technological innovation, social mobility, cultural influence, and global competitiveness. It notes that while higher education serves as a cornerstone for development, the challenges and trajectories faced by higher education systems differ globally. This article explores the various ways in which higher education contributes to national development in different domains: (1) promoting economic development and innovation-driven growth for a nation, (2) enhancing social mobility and equity for a nation, (3) fostering culture and global competitiveness for a nation and (4) promoting academic freedom for a nation [14, 36, 37].

Higher education is a powerful tool for sustainable national development, its impacts and challenges vary based on the political, economic, and cultural contexts of different nations. It highlights the need for balancing globalization with the preservation of local knowledge and traditions, ensuring that higher education systems remain inclusive, equitable, and responsive to the changing global landscape. This article provides a comprehensive analysis of the multifaceted role of higher education in sustainable national development, viewed from an international perspective. It underscores the critical function of higher education in fostering national development, emphasizing its contributions to economic growth, technological innovation, social mobility, cultural influence, and global competitiveness. While higher education is recognized as a foundational pillar for development, the challenges and trajectories faced by higher education systems vary across regions. This article examines the diverse ways in which higher education influences national development across several key areas: (1) Economic development and innovation-driven growth, (2) Social mobility and equity, (3) Culture and global competitiveness, and (4) Academic freedom and public policy [2, 15, 35, 38, 39].

In conclusion, higher education serves as a vital catalyst for sustainable national development, yet its impact is shaped by the unique political, economic, and cultural contexts of each nation. To maximize its potential, a balanced approach is essential—one that integrates the benefits of globalization while safeguarding and nurturing local knowledge and traditions. This requires proactive policies that promote inclusive and equitable access, curriculum reforms that reflect both global and indigenous perspectives, and institutional strategies that foster adaptability in an evolving world. By engaging educators, policymakers, and communities in ongoing dialogue and innovation, higher education can become a transformative force that not only drives economic growth but also sustains cultural identity and social cohesion [2, 15, 38, 39].

#### 5. Recommendation

It is vital to enforce the distinguished assimilation of sustainability entities in higher education (HE) and establish an academia-wide collective curriculum on sustainability in an efficient manner, in order to



disseminate and stimulate thoughts with forthcoming generations. Thus, a widely held consensus is that sustainable development must be central to university curricula, supported by extensive research initiatives. Emphasizing research and development is essential for fostering sustainability and social welfare within educational institutions, contributing to a vibrant campus culture, especially higher education. Higher education serves as a pivotal engine for advancing social civilization and national development, while simultaneously responding to societal obligations and commitments. The practice and challenges of sustainable development in higher education is a critical issue, as higher education institutions are tasked not only with educating graduates who possess the competencies for sustainable development but also with contributing to the achievement of the global Sustainable Development Goals (SDGs) through research, operational practices, and active engagement. From an international perspective, higher education plays a pivotal role in advancing sustainable national development by fostering innovation, enhancing social mobility, and cultivating globally competent citizens. However, universities must also remain deeply attuned to their social responsibilities at the local level. In Taiwan, service-learning has emerged as a vital pedagogical approach through which higher education institutions foster students' civic engagement and sense of social responsibility. Service-learning integrates academic instruction with community engagement, enabling students to apply theoretical knowledge in addressing real-world social issues. Through active participation in community services—ranging from working with marginalized populations to engaging in environmental initiatives—students develop empathy, critical thinking, and a stronger commitment to the public good. These experiences not only bridge the gap between theory and practice but also facilitate the internalization of ethical responsibility and long-term civic awareness. Furthermore, service-learning fosters sustainable partnerships between universities and local communities. By collaborating with community-based organizations, public institutions, and non-governmental organizations, students gain experience in interdisciplinary cooperation and dialogic engagement. At the same time, academic resources are mobilized to support community development, reinforcing the reciprocal relationship between the university and society. This synergy between localized action and global vision exemplifies the operationalization of University Social Responsibility (USR) in practice. In light of this, higher education institutions must continuously reflect on how they can align their missions with the principles of sustainable development while also responding to the specific needs of their communities. By cultivating graduates who possess critical consciousness, a commitment to social justice, and ethical leadership, universities can realize their dual mission of advancing knowledge and contributing meaningfully to societal transformation. Promoting the implementation of social responsibility within universities will strengthen the collaboration between academic institutions and regional urban-rural development. This shift will encourage universities to transcend the confines of the academic ivory tower and actively engage in regional innovation and development. By dedicating academic resources to local industries, community cultures, and key development issues—both in urban and rural contexts—universities can become pivotal contributors to local sustainable development. Through these efforts, universities will play a vital role in fostering the collective growth of Taiwanese society [37-41].

### **Transparency:**

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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## References

- [1] K. S. Beckett, "RS Peters and the concept of education," *Educational Theory*, vol. 61, no. 3, pp. 239–255, 2011. <https://doi.org/10.1111/j.1741-5446.2011.00401.x>
- [2] R.-J. Wang and Y.-H. Shih, "What are universities pursuing? A review of the Quacquarelli Symonds world university rankings of Taiwanese universities (2021–2023)," *Frontiers in Education, Frontiers Media SA*, vol. 8, p. 1185817, 2023. <https://doi.org/10.3389/educ.2023.1185817>
- [3] R. Gowen, *Autonomy, citizenship, the market and education*. In D. Bridges (Ed.), *Education, autonomy and democratic citizenship: Philosophy in a changing world*. London, England: Routledge, 1997.
- [4] Y.-H. Shih, "An examination of the functions of a general education art curriculum in universities," *Policy Futures in Education*, vol. 17, no. 3, pp. 306–317, 2019. <https://doi.org/10.1177/1478210318811012>
- [5] Y.-H. Shih, C.-C. Wu, and C.-F. Chung, "Implementing intergenerational learning in a preschool: A case study from Taiwan," *Educational Gerontology*, vol. 48, no. 12, pp. 565–585, 2022. <https://doi.org/10.1080/03601277.2022.2053035>
- [6] Y.-H. Shih, "Case study of intergenerational learning courses implemented in a preschool: Perceptions of young children and senior citizens," *Educational Gerontology*, vol. 50, no. 1, pp. 11–26, 2024. <https://doi.org/10.1080/03601277.2023.2216089>
- [7] S. Pal, "Education as a catalyst for economic development: A comparative study," *International Journal of Science and Research*, vol. 12, no. 5, pp. 1138–1142, 2023. <https://doi.org/10.21275/SR23514151945>
- [8] L. H. Lin, "A study on the knowledge economy and lifelong learning," *T&D Fei-Hsun*, vol. 43, pp. 1–10., 2006.
- [9] UNESCO, "A renewed vision for higher education needs to focus on quality and inclusion," Retrieved: <https://www.unesco.org/en/articles/renewed-vision-higher-education-needs-focus-quality-and-inclusion>, 2023.
- [10] J. Li, E. Xue, Y. Wei, and Y. He, "How popularising higher education affects economic growth and poverty alleviation: Empirical evidence from 38 countries," *Humanities and Social Sciences Communications*, vol. 11, no. 1, p. 520, 2024. <https://doi.org/10.1057/s41599-024-03013-5>
- [11] A. A. Wadee and A. Padayachee, "Higher education: Catalysts for the development of an entrepreneurial ecosystem, or... are we the weakest link?," *Science, Technology and Society*, vol. 22, no. 2, pp. 284–309, 2017. <https://doi.org/10.1177/0971721817702290>
- [12] OECD, "Social mobility and equal opportunity," Retrieved: <https://www.oecd.org/en/topics/social-mobility-and-equal-opportunity.html>, 2025.
- [13] F. M. Collyer, "Global patterns in the publishing of academic knowledge: Global North, global South," *Current Sociology*, vol. 66, no. 1, pp. 56–73, 2018. <https://doi.org/10.1177/0011392116680020>
- [14] G. Finnveden, J. Newman, and L. A. Verhoef, "Sustainable development and higher education: Acting with a purpose," *Sustainability*, vol. 11, no. 14, p. 3831, 2019. <https://doi.org/10.3390/su11143831>
- [15] R.-J. Wang, Y.-M. Chiang, C.-M. Hsueh, Y.-H. Shih, and C.-C. Wu, "Empowering university students' learning in Taiwan's higher education: Pathways to overcome challenges," *Edekwiss Applied Science and Technology*, vol. 8, no. 6, pp. 4261–4269, 2024. <https://doi.org/10.55214/25768484.v8i6.2926>
- [16] Ministry of Human Resource Development, *National education policy 2020, Government of India*. India: Ministry of Human Resource Development, 2020.
- [17] Ministry of Education Republic of Singapore, *The nurturing early learners– A curriculum framework for kindergartens in Singapore: Guidelines for teaching Chinese in preschool*. Singapore: Republic of Singapore: Ministry of Education, 2023.
- [18] Y.-H. Shih, "Learning content of 'multiculturalism' for children in Taiwan's elementary schools," *Policy Futures in Education*, vol. 18, no. 8, pp. 1044–1057, 2020. <https://doi.org/10.1177/1478210320911251>
- [19] Y.-H. Shih, "Culturally responsive curriculum: A systematic overview," *Edekwiss Applied Science and Technology*, vol. 8, no. 6, pp. 6917–6925, 2024. <https://doi.org/10.55214/25768484.v8i6.3493>
- [20] C.-C. Wu, "Constructing Counting and Arithmetic Learning Trajectories for Kindergarteners: A Preliminary Investigation in Taiwan," *Children*, vol. 9, no. 12, p. 1994, 2022. <https://doi.org/10.3390/children9121994>
- [21] C. C. Wu, "The effects of Hakka bilingual programs on learning interests for kindergarteners," *International Journal of Bilingual Education and Bilingualism*, vol. 27, no. 8, pp. 1142–1152, 2024. <https://doi.org/10.1080/13670050.2024.2345709>
- [22] EUA, "How universities can protect and promote academic freedom," Retrieved: <https://www.eua.eu/publications/positions/how-universities-can-protect-and-promote-academic-freedom.html>, 2025.
- [23] D. Kabasakal Badamchi, "Academic freedom: How to conceptualize and justify it?," *Philosophy & Social Criticism*, vol. 48, no. 4, pp. 619–630, 2022. <https://doi.org/10.1177/01914537211072888>
- [24] T. Kromydas, "Rethinking higher education and its relationship with social inequalities: Past knowledge, present state and future potential," *Palgrave Communications*, vol. 3, no. 1, pp. 1–12, 2017. <https://doi.org/10.1057/s41599-017-0001-8>
- [25] Y.-H. Ye, Y.-H. Shih, and R.-J. Wang, "General education in Taiwan's universities: Development, challenges, and role," *Policy Futures in Education*, vol. 20, no. 8, pp. 847–863, 2022. <https://doi.org/10.1177/14782103211067597>
- [26] OECD, *The knowledge-based economy*. Paris: OECD, 1996.



- [27] World Bank Group, "Tertiary education," Retrieved: <https://www.worldbank.org/en/topic/tertiaryeducation>, 2025.
- [28] P. Meikle, "Social justice as a dimension of university social responsibility," Retrieved: <https://www.intechopen.com/chapters/86017>. [Accessed 2023].
- [29] Y.-H. Shih and R.-J. Wang, "Incorporating gender issues into the classroom: Study on the teaching of gender-related courses in the general curriculum of Taiwan's universities," *Policy Futures in Education*, vol. 20, no. 1, pp. 44–55, 2022. <https://doi.org/10.1177/14782103211009641>
- [30] Y. H. Ye and Y.-H. Shih, "Development of John Dewey's educational philosophy and its implications for children's education," *Policy Futures in Education*, vol. 19, no. 8, pp. 877–890, 2021.
- [31] P. Du Plessis, "Decolonisation of education in South Africa: Challenges to decolonise the university curriculum," *South African Journal of higher education*, vol. 35, no. 1, pp. 54–69, 2021. <https://doi.org/10.20853/35-1-4426>
- [32] E. K. Niemczyk and Z. Rónay, "Roles, requirements and autonomy of academic researchers," *Higher Education Quarterly*, vol. 77, no. 2, pp. 327–341, 2023. <https://doi.org/10.1111/hequ.12403>
- [33] A. V. Oleksiyenko, "The challenge of academic freedom at post-Soviet universities: Pursuing critical inquiry through transformative academic development," *International Journal for Academic Development*, pp. 1–4, 2025. <https://doi.org/10.1080/1360144X.2024.2405592>
- [34] J. Wright, A. Avouris, M. Frost, and S. Hoffmann, "Supporting academic freedom as a human right: challenges and solutions in academic publishing," *The International Journal of Human Rights*, vol. 26, no. 10, pp. 1741–1760, 2022. <https://doi.org/10.1080/13642987.2022.2088520>
- [35] I. Žalėnienė and P. Pereira, "Higher education for sustainability: A global perspective," *Geography and Sustainability*, vol. 2, no. 2, pp. 99–106, 2021. <https://doi.org/10.1016/j.geosus.2021.07.001>
- [36] M. Aghajani, A. Memari, R. J. Tumpa, and G. Ruge, "Systematic exploration of sustainability in higher education: a tertiary perspective," *International Journal of Sustainability in Higher Education*, 2024. <https://doi.org/10.1108/IJSHE-02-2024-0095>
- [37] C. K. Lim, M. S. Haufiku, K. L. Tan, M. Farid Ahmed, and T. F. Ng, "Systematic review of education sustainable development in higher education institutions," *Sustainability*, vol. 14, no. 20, p. 13241, 2022. <https://doi.org/10.3390/su142013241>
- [38] A. Y. Li, "A systemic perspective on the development of higher education and university social responsibility," *Air Force Bimonthly Journal*, vol. 683, pp. 125–148, 2021.
- [39] Y.-L. Lin, "Practicalities and challenges of sustainable development in higher education," *Taiwan Education Review*, . . vol. 743, pp. 32–39, 2024.
- [40] A. G. Abo-Khalil, "Integrating sustainability into higher education challenges and opportunities for universities worldwide," *Heliyon*, vol. 10, no. 9, p. e29946, 2024. <https://doi.org/10.1016/j.heliyon.2024.e29946>
- [41] Ministry of Education, "Advancing the practice of university social responsibility—Fostering local connections and talent development," Retrieved: <https://www.ey.gov.tw/Page/5A8A0CB5B41DA11E/9fd14ac8-4814-4b69-90e3-726e2641be39>, 2019.