

Higher Education in Asia: Quality, Excellence and Governance

Angela Yung-Chi Hou
Tung-liang Chiang
Sheng-Ju Chan *Editors*

Higher Education in Taiwan

Global, Political and Social Challenges
and Future Trends



Higher Education Evaluation and
Accreditation Council of Taiwan



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Higher Education in Asia: Quality, Excellence and Governance

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Foreword

In one of her first speeches, the new Prime Minister of Norway emphasized in early 2015 the need for her country to move away from oil and gas dependence and rather build its future on knowledge and its applications. Among the emerging economies in South-East Asia, Taiwan has certainly been one of the first nations to acknowledge early on that higher education was essential for the creation, dissemination, and application of knowledge. It has systematically placed higher education capacity building at the center of its development agenda, thereby demonstrating the recognition that universities and other types of higher education institutions play a crucial role in fostering the knowledge, insights, innovative abilities, and creative thinking needed for designing and implementing effective economic growth strategies.

It is therefore not surprising to observe the impressive expansion and thorough transformation of the Taiwanese higher education system over the past decades. After operating as an elitist system until the late 1980s—starting from a very small network of only 7 institutions in the early 1950s—it has gradually moved toward a mass system with close to 160 institutions today, characterized by the presence of a dynamic private sector that represents about two-thirds of the total number of higher education institutions and almost 70% of total enrollment. The recent rapid growth of the system has followed the political evolution from authoritarian to democratic regime. A unique feature of the Taiwanese system is that its development reflects the combination of elements of the Chinese, Japanese, and US university traditions.

Against this background, the book edited by Professors Hou, Chiang, and Chan could not arrive at a better juncture. This ambitious publication, bringing together an outstanding group of scholars, provides a comprehensive panorama of the higher education system in Taiwan, while at the same time weaving in an international reference framework that helps to understand the evolution of the Taiwanese universities in a comparative perspective. The book shows us the many threads of the complex story of the impressive transformation that the Taiwanese higher education system has undergone in the past decades. It tells a tale of rapid quantitative expansion, institutional diversification with the growth of a sizeable private higher education subsector, significant development of internationalization, careful efforts to put in place a strong quality assurance system, and the emergence of a few leading research universities.

The book has three parts. The first part gives the historical background, analyzes how the higher education system has become substantially more diverse, and examines the evolution of government policy over the years. It shows the impact of key government decisions that have included deregulation to allow religious groups and private investors to enter higher education, a market-driven management approach that gave more autonomy to both public and private universities, measures to enhance internationalization, and a series of excellence initiatives to boost research and teaching excellence.

The second part starts by documenting the emergence and development of a state-of-the-art quality assurance system including both institutional and academic accreditation, with a focus on student learning outcomes. The process has been led by the Higher Education Evaluation and Accreditation Council of Taiwan (HEEACT), which was set up in 2005. In the context of the government's autonomy policy, quality assurance evolved toward a self-accreditation system after 2012. The Taiwanese quality assurance model stands out today as one of the most advanced in South-East Asia.

Next comes a full account of the various excellence initiatives launched by Taiwan since 2005, following similar programs in China, Korea, and Japan. The government has supported efforts to build world-class universities in the country through three main excellence initiatives. The first one was the Development Plan for World Class Universities and Research Centers of Excellence (2005–2016). The second one was the Teaching Excellence Initiative (2005–2014), which puts Taiwan among the few countries that have paid serious attention to improving teaching and learning, rather than focusing only on research excellence. The most recent one is the Technological University Paradigms (2013). These initiatives have put pressure on universities to internationalize their campus by recruiting international students and foreign faculty, put English-taught programs in place, and deepen collaborations with foreign universities. The initial results are promising, as the number of Taiwanese universities in the top 500 increased significantly, as did the quantity and quality of the universities' research output.

The second part also has a full chapter on the development of internationalization in Taiwan and one on the evolution of governance. The latter one reveals how higher education in Taiwan has gradually shifted from a traditional, government-controlled bureaucratic system into a more decentralized system. While the government has undoubtedly granted more autonomy to universities in Taiwan, it appears that it has not gone as far as other countries in the region, and that the comprehensive accountability system has translated in many bureaucratic reporting requirements for the higher education institutions.

The third and last part of the book focuses on current challenges faced by the Taiwanese universities, while also proposing options for overcoming these challenges. One of the significant issues that is explored in this part is the demographic evolution and the ageing of the Taiwanese population, which is likely to have a constraining impact on doctoral education, as is happening in Japan and South Korea. With a rapidly ageing society, universities have increased their focus on educational

programs with a lifelong learning orientation and restructured doctoral education with a growing emphasis on serving the needs of industry.

Chapter 9 discusses the important topic of equity in terms of access and success for students from low-income families and reviews the extent to which the massification of higher education in Taiwan has reduced disparities. It shows that massification has not translated automatically into more equity for traditionally under-represented groups, but that the government's flagship policies in this area, the Multiple Entrance Program (MEP) and the Tuition and Miscellaneous Fees Exemption (TMFE), have been effective in helping to improve the situation. Linked to the equity dimensions, the next Chapter investigates how technological innovations and the rapid increase in open online courses have opened new pathways for access to higher education in Taiwan.

The following two chapters are dedicated to academic careers, the first one focusing on the promotion system in Taiwanese universities and the second one analyzing issues of stratification of doctoral degrees and the role of academic networks. Chapter 13 presents an in-depth review of progress achieved by Taiwanese universities in developing institutional research departments and how it has influenced their governance. Finally, Chap. 14, presents general reflections on current trends and outstanding issues for higher education in Taiwan, such as the consequences of being an ageing society, the need for strengthening linkages between universities and the world of work, the importance for universities to assume greater social responsibility, the pressure arising from international ranking competitiveness, and transnational talent mobility.

Even though this rich publication covers a wide array of topics, it was not designed as an encyclopedia of higher education in Taiwan, and therefore could not cover all aspects in a systematic fashion. But the book constitutes the perfect platform for further work on complementary aspects that have not been included, such as funding issues. For instance, it would be worth investigating the unmet financing needs at the higher education level and how the government of Taiwan could elaborate a sustainable financing strategy that would achieve greater resource mobilization and funding allocation mechanisms linked to the performance of universities.

Taiwan is one of the leading East-Asian countries that have sought carefully to combine and align the main ingredients of academic success: talent, resources and governance.¹ For two decades, the government of Taiwan has devoted substantial resources to promote excellence in research and teaching. But reluctance to grant complete institutional autonomy to universities may have held them back slightly, compared to their regional peers. In the latest yearly ranking of national higher education systems prepared by the University of Melbourne since 2012, Taiwan takes the 21st spot in 2020 among 50 national systems of higher education, ahead of Korea (24), China (26) and Malaysia (27). Singapore has the best performance

¹Salmi, J. (2009). *The challenge of establishing world-class universities*. Washington DC: The World Bank.

among all Asian nations in fourth position; Hong Kong is in 14th place; and Japan is number 20.²

I commend Professors Angela Yung-Chi Hou, Tung-liang Chiang, and Sheng-Ju Chan for putting together this outstanding publication on the transformation of higher education in Taiwan. I trust that the readers will find the book as informative and stimulating as I did. I am convinced that the various chapters will make a worthwhile contribution to the national debate on the future of higher education, and help advance the government's understanding of the importance of autonomy and the need to empower academics and universities in Taiwan to work together toward academic excellence. Finally, this book provides comparative education researchers all over the world with an insightful exploration of the evolution of the Taiwanese higher education system in recent times.

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²<http://www.universitas21.com/news/details/220/u21-ranking-of-national-higher-education-systems-2016>.

Praise for *Higher Education in Taiwan*

“‘*Good practice*’ is only ‘*good*’ within the given context, since contexts have proven to be the key factor in any reform or change process. The current contribution is an excellent example of policy diffusion and transfer from an international context and the way local factors influence its formation, implementation and impact. Like many other higher education systems, the Taiwanese higher education has entered an era of transformations amid impossible to predict and ever-changing environment. In parallel with outstanding achievements in reforming the system—e.g. deregulation, promoting autonomy of higher education institutions; establishment of a robust quality assurance system to drive improved performance and excellence—the system still confronts challenges linked with market demand and higher education offer alignment, internationalization (at home and abroad), greater international visibility and influence, among the rest. The current book is a valuable contribution to the body of knowledge on higher education reforms in general, and governance and quality assurance in particular. It provides an authentic perspective on policy diffusion and transfer from an international to a local context by demonstrating the ways in which cultural and contextual peculiarities shape a policy and influence its implementation. Not least is the role of the direct implementers of change, the change agents, in the success of the endeavor and turning it into another ‘*good practice*’.”

—Dr. Susanna Karakhanyan, *INQAAHE President*

“The Editors of this book put together scholars who have rich research and teaching experiences in higher education institutions across Taiwan to engage in critical reflections of higher education development from historical, comparative and international perspectives. This book is highly relevant for those who are interested in higher education development, university governance, quality assurance and internationalization of Taiwan.”

—Prof. Dr. Joshua Ka-Ho Mok, *Vice-President and Lam Man Tsan Chair Professor of Comparative Policy, Lingnan University*

“The rapid transformation of higher education in Asia has tended to drive a more narrow focus on contemporary changes and challenges. Research on higher education

have nevertheless demonstrated that present changes in the sector often is strongly influenced by past history and legacy, and that without a broad historical understanding it is also difficult to make informed reflections about the future. The current volume provides a comprehensive overview of the developments of the higher education sector in Taiwan addressing how the country is adapting to global trends while taking into account the domestic historical, political and social context. Hence, the current volume is a must-read for those wanting an in-depth understanding of the on-going transformations of higher education in Taiwan.”

—Prof. Dr. Bjørn Stensaker, *Professor of higher education, University of Oslo*

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Part I
Understanding Taiwan Higher Education
in Historical, Political and Social Contexts

Chapter 1

Historical Development of Higher Education in Taiwan from Past to Present



Angela Yung-Chi Hou, Tung-liang Chiang, Sheng-Ju Chan,
and I-Jung Grace Lu

Abstract As one of the Confucian societies, higher education in Taiwan has experienced varying stages of change, from a colonial to a Chinese system, now moving into a modern system. Owing to divergence of global trends, coupled with local concerns since the 1990s, Taiwan's higher education system has encountered several challenges as those in East Asia. This chapter aims to provide background information for the readers by exploring the evolution and changes in Taiwan's higher education system from a historical perspective. The objectives and impacts of the policy change at each stage are stated respectively. An introduction to the content of the book is highlighted at the end of the chapter.

Keywords Taiwan higher education · Educational reform · Policy change

1.1 Higher Education Massification in Asia and Taiwan

With the fast development of the economy and increasing social demand for higher education, higher education in Asia has evolved from the elitist stage into the massification phase over the past decades (Shin, 2015). Enrollment in Asian higher education has increased by over 50%, and in East Asia and Pacific, the gross enrollment rate even reached to world average levels (Calderon, 2012, Marginson, Kaur, & Sawir, 2011). According to INQAAHE, there are around 76,387 higher education providers,

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with more than 349 million students enrolled in the region up to 2019 (INQAAHE, 2019).

The Asia-Pacific region has been characterized by its diversity and complexity. The countries in the region have been shaped not only by geography, but also by the language, economy, politics, region, and their international cooperation. Due to the variations in demographic and economic development, national higher education systems in Asia differ vastly in size and growth (Hou, Ince, Tasi, & Chiang, 2015). As a result, massification generating accessibility to higher education increases public concern over decreasing quality of institutions and students, as well as escalating inequality in society. Some scholars argue from a conflict theory perspective that “mass higher education is a consequence of social competing between people are competing for the limited resources, decent jobs, and places in the upper social classes” (Shin, 2015, p. 5).

Over the past decades, the development of higher education in Taiwan has been influenced interchangeably by Chinese heritage, Japanese cultures, and American universities. Higher Education has always been in the spotlight throughout these social transformations and political system transitions. According to Chou (2015a), the uniqueness of the system characterized by a combination of Japanese, American, Chinese, and local features indicates “options facing Taiwan in its pursuit of localization and globalization in higher education” (p. 92). Since the 1980s, Taiwan society has experienced rapid changes in politics, economy, and culture, as well as education. After the 1990s, the education system moved gradually toward a universal system from elitist mode by governmental policies, including inviting private sectors to enter higher education, adopting a market-driven management approach, enhancing internationalization, and engaging in the pursuit of excellence, etc. (Ministry of Education (MOE), 2019a; MOE, 2019b).

As one of the Confucian societies, higher education in Taiwan has undergone varying stages of transformation from a colonial to a Chinese system, and shifting itself into a modern system. Yet, Taiwan’s higher education system still encountered similar challenges to other parts of East Asia, owing to divergence of global trends coupled with local concerns after 2000. This chapter aims to provide background information for the readers by exploring the evolution and transformation of Taiwan’s higher education system from a historical retrospect. The objectives and impacts of the policy change at each stage are stated respectively. An introduction to the content of the book is highlighted at the end of the chapter.

1.2 An Overview of Taiwan in Terms of Geography, Economy, and Political System

Taiwan, formerly known as Formosa, is located in the western Pacific, approximately 160 km off China’s southeast coast, midway between Japan and the Philippines (Executive Yuan, Republic of China, 2016). Taiwan has a geographical area of 36,193

square kilometers, with the Central Mountain Range stretching from north to south. Up to 2019, Taiwan had a population of 23.77 million, with an average population density of 649 people per square kilometer (1,680 per square mile), which makes it the 17th most densely populated country in the world.

Ruled at various times by Chinese, Dutch, and Japanese government, Taiwan is considered an immigrant society, consisting of 86% local Taiwanese, 12% refugees who fled from mainland China after the Chinese Civil War, and 2% Taiwanese Aborigines, descendants of the Austronesian peoples who dominated Taiwan until the seventeenth century. Mandarin is the official and spoken language. Japanese is spoken by very senior people who received their education during Japanese colonial rule in the early twentieth century (World Population Review, 2019).

As a dynamic and democratic state, Taiwan has an economy that has grown rapidly since the 1980s. Its estimated nominal GDP per capita for 2016 was \$21,571, which ranks as the seventh largest in Asia. Its total PPP is over \$1 trillion, putting its economy in 21st place when compared to other countries in the world. As of 2018, telecommunication, financial services, and utility services were the three highest paid sectors in Taiwan (Wikipedia, 2019). Besides, Taiwan is the most technologically advanced computer microchip maker in the world (The Economist, 2018).

After being colonized by the Japanese government over 50 years, Taiwan was returned to the Chinese government at the end of World War II. Lost in the Chinese Civil War, the ruling party, Kuomintang (KMT) retreated from mainland China to Taiwan in 1949 with two million mainlanders. With authoritarian one-party leadership, the KMT government then ruled the island under Martial Law until 1987. Following the gradual liberation and democratization of the political system during the presidency of Chiang Ching-kuo from 1978 to 1988, Taiwan was gradually transformed from an authoritarian state into the first democratic country in Chinese Society (Chou, 2015b; Chiang, 2018).

1.3 Five Developmental Stages and Context in Taiwan Higher Education: Major Policies, Events, and Paradigm Shift

As indicated above, Taiwan's higher education development and governance have been interchangeably influenced by Western, Chinese, and Japanese systems. The modernization of Taiwan's higher education started during the colonial period in 1930s, and underwent a five-stage transformation, including the colonial period (Japanese rule); state control and educational reform (from 1945 to 1985); the expansion and deregulation era (from 1986 to 2005); the excellence and quality assurance golden age (from 2005 to 2016), as well as the current era of equity and social responsibility (from 2016 to present) (Chen, 1979; Cheng, 2011; Huang, 2013; Huang, 2019).

- ***Colonial Period (Japanese Rule): From 1920 to 1945***

During the early development of Taiwanese higher education in the Japanese colonial period from 1920 to 1945, there was one university and only a few colleges, with around 5000 students in total (MOE, 2019a). They include *Taihoku Higher School, Taihoku Imperial University, Taihoku Medical College, Taichu Agriculture and Forestry College, Tainan Commercial College, Taihoku Commercial College, Tainan Technical College, and Private Taihoku Girl's College*, etc. 80% of the students entering these institutions were Japanese rather than Taiwanese at that time. Taiwanese students rarely had chances to enter higher education except in the field of medicine (Wu, et al. 1989). It was found that the number of Taihoku Imperial University's graduates by 1943 was 161, contributing to 19% in total. 79 out of 179 were in the medical field, with a ratio of 45% (Wu, 1986).

Taihoku Imperial University, Taiwan's first modern university, was established in 1928 (National Taiwan University, 2019) as one of the Imperial Universities by the Japanese government. The Faculty of Literature and Politics and the Faculty of Science and Agriculture were the first to be established with a total number of 59 students. The Faculty of Medicine and the Faculty of Engineering were set up in 1935 and 1943, respectively (National Taiwan University, 2019). The founding of Taihoku Imperial University was considered as Japanese ambition expansion into South China and the South Pacific after WWI (Wu, et al., 1989). As a result, it not only involved many well-known Japanese scholars in research centers, but also received grants and funding for policymaking research projects (Wu, Chen, & Wu, 1989; National Taiwan University, 2019).

Moreover, the colleges in agriculture, business, and industry also served specific purposes for Japanese national development. For example, Tainan Commercial College supported the strengthening of Japanese economic influence in Taiwan and in Asia; Tainan Technical College, renamed as National Cheng Kung University in 1971, initiated three fields of Mechanics, Electrical Engineering, and Applied Chemistry, which aimed to respond to Japanese and local needs in industrial development (National Cheng Kung University, 2019).

In brief, the main purpose of Taiwan higher education institutions in the Japanese colonial era was "to provide research material or high-level manpower needed for Japan's colonial policy, rather than to raise the quality of the people ruled" (Wu, et al., 1989, p. 123). Notably, Taiwanese students could not compete with Japanese students in terms of access to higher education during this period.

- ***State Control and Educational Reform: From 1945 to 1985***

There were two phases in this period from 1945 to 1985. The first phase, identified as HE model shift, was from 1945 to 1949, after Taiwan was restored to the Chinese government. All existing universities and colleges were renamed and reformed by applying the Chinese institution model, but with American forms such as academic structure, administrative organization, curriculum and instruction, degree, and graduation requirements (Chou, 2015a). Concurrently, Taiwan people had "full access to

the opportunities of education” (Wu, et al., 1989). For example, Taihoku Imperial University was formally transferred to the Chinese government by being renamed National Taiwan University and was expanded into six faculties, including the Faculty of Liberal Arts, Law, Science, Medicine, Engineering, and Agriculture (National Taiwan University, 2019). Up to 500 students were enrolled, and the study period was also changed from three to six years, under the Japanese system, to four years.

The second phase of this period began with the Nationalist government’s withdrawal from mainland China and removal to Taiwan in 1949. The KMT government was aggressively committed to the development of Taiwan’s higher education, but it also consolidated state control over education. In 1950, the KMT government announced so-called “educational guidelines during nation’s reconstruction period” (戡亂建國教育實施綱要) as a foundation of national development. The guideline put emphasis on educating students to realize “Three Principles of the People,” applying this political ideology into curriculum revision at the compulsory education, and strengthening the concept of “Recovering the Mainland” across all levels of education. In 1953, with the Nationalist government’s permission, the first private university, Tunghai University, was reestablished in Taiwan by the United Board for Christian Education in China. On 11 November, The American Vice President Richard Nixon “arrived in Taichung to preside over Tunghai University’s ground breaking ceremony” (Tunghai University, 2019).

Economy has always been one of the driving forces of education reforms in Taiwan. In 1953, as guiding principles for national economic development, the first four-year economic construction plan was published, addressing three themes including “agricultural and industrial production,” “maintaining economic stability,” and “increasing foreign income” (Executive Yuan, 2015). Due to Taiwan’s economic prosperity in the 1960s, the KMT government introduced several education reforms, particularly in expanding education at secondary level and in vocational training institutes. On one hand, the education reform was meant to respond to national development and industry needs; on the other hand, government control remained strong by publishing principles and standards for curriculum development at primary and secondary schools, even teachers’ colleges. In other words, education became a policy tool for the KMT government to regulate “society and people” during this phase.

Higher education expansion in Taiwan began in the 1970s after the establishment of several private higher education providers (Kuo, Ranis, & Fei, 1981). As of 1964, there were only 20 universities and 21 colleges. In 1970, the number of colleges increased to 69. However, the rapid increase resulted in the suspension of new school applications and approvals by the government in 1972. In 1985, when the government announced that it would accept new applications, the total number of universities was 28 plus with 77 junior colleges.

To conclude, the relationship between government and the higher education sector during this phase was based on a top-down approach with a bureaucratic hierarchy, which meant that that the MOE had direct control power over individual universities. In general, academic freedom was extremely limited while higher education institutions functioned as parts of governmental unit. They had to follow standard rules,

procedures, and regulations, enjoying limited institutional autonomy. For example, the appointment of presidents in national universities was decided by senior officials in the government; in addition, institutional governance lacked other stakeholders' engagement. There were rigid regulations about the university curriculum, including some designated compulsory courses nationwide, such as military training and the history of China. Faculty members at public universities were regarded as a subgroup of public servants, with a commitment to the public goods. All these features demonstrated that the higher education sector was under tight control, in line with governmental direction and commands. These institutions were therefore called "MOE university" (教育部大學).

• ***Expansion and Deregulation Era: From 1986 to 2005***

This period of 20 years dominated by two major trends in Taiwanese higher education: rapid expansion, and deregulation. With limited financial resources, the government of Taiwan either allowed individual or private sectors to establish higher education institutions, or updated junior colleges to four-year universities. As a result, individual institutions were forced to be more competitive and accountable in the proliferation of marketization and massification of higher education in Taiwan (Giroux, 2002; Chou, 2015b; Shin, 2015).

During this period, the KMT government tended to be more open and supportive of the establishment of private universities. As of 1986, 14.2% of people aged 18 to 24 attended postsecondary education institutions. Moreover, in 1989, the government announced that the national agenda for education would strive to boost the quantity and quality of universities and colleges. Driven by national policy, the 1990s saw Taiwanese higher education rapidly expand and flourish. When the University Act was passed in 1994, the number of universities almost doubled. After 2000, the total number of universities and colleges had risen to 158, and gross enrollment rate increased to 49.1%. Although the number of universities increased to 142, the number of junior colleges dropped from 77 to 16 between 1985 and 2000 (MOE, 2019a). Interestingly, the growth of massification in higher education brought learning opportunities for young people, and competition for entering top research universities became severer than ever. It was argued that "while all the above may sound good, it remains debatable whether this expansion and the increasing 'choices' automatically help to improve students' life chances" (Chen, 2010, p. 3).

Following political democratization and social liberation in the late 1980s, the Taiwan government was pressured to lift state control over institutional governance and increase institutional autonomy. After the 1990s, the government was opted to respond to global and regional trends in higher education, with a particular focus on deregulation as well as accountability (Mok, 2000; Hou, 2011). There was therefore a move for deregulation, pressured by to liberate state control over past four decades began (Cheng, 2011). The grass-root movement titled *410 Education Reform Alliance*, which soon gained massive support, was launched to echo this wider notion calling for greater deregulation of the education sectors. Chan, Yang and Liu (2018) indicates that the purpose of higher education deregulation and liberation was to "avoid inappropriate intervention from political parties and governments" (p. 79).

Chou also points out that Taiwan's universities "have shifted from traditional norms of state control to those of state supervision" (Chou, 2015a, p. 11) under political liberation movement (Song, 2005).

Several deregulation initiatives have been launched subsequently. National universities and private institutions were given more autonomy over financial management and operation of their governing body, respectively. In 1999, the National University Endowment Fund Establishment Act was enacted to "facilitate the flexible operations of university finances" (MOE, 1999). The 1997 Private Education Act Revised also gave private schools more autonomy in the operation of the board of trustees and the establishment of branch campuses. Several policies were developed in order to empower universities, including the abolishment of national required courses, authorizing universities to review and undergoing the faculty member' promotion by their own, the incorporation of national universities, and carrying out flexible scheme over enrollment by department and programs. (Ma, 2013). Moreover, the University Act also lifted state control over the appointment of university presidents, tuition fee charges, and multiple college admission (Tsai & Shavit, 2003; Chou, 2015b). To some extent, universities enjoyed institutional autonomy during this period, but the call to develop a national quality assurance system to review their accountability and academic performances quickly escalated.

- ***Pursuit of Excellence and Quality Assurance (from 2005 to 2016) Golden Age***

The period (from 2005 to 2016) can be depicted as an era of "pursuit of excellence and quality assurance". On one hand, the government wanted to give universities more autonomy in order to pursue academic excellence; on the other hand, an external quality assurance framework was formed to assess institutional accountability. It is noted that "governments' aspirations to building world class universities has accelerated the implementation of selection and concentrated polices in regions and countries" (Cheng, Wang & Liu, 2014, p. 3), and Taiwan is no exception. As Lo indicated, "the quest for building world-class universities has become a trend of higher education development in several East Asian countries where the massification of higher education has been accomplished" (Lo, 2014, p. 24).

Propelled by global competition over attracting academic talent, the Taiwan government adopted the objective of "pursuit of excellence and promotion quality of Taiwan's higher education system" as a national agenda and concentrated governmental resources on selected universities. Since 2005, three main excellence projects have been launched, including the Development Plan for World Class Universities and Research Centers of Excellence (2005–2016), the Teaching Excellence Initiative (2005–2014), and the Technological University Paradigms (2013) (Yonezawa & Hou, 2014). Following the implementation of excellence initiatives, university recipients were pressured to internationalize campuses by recruiting international students and foreign faculty, supporting English-taught programs, deepening collaborations with foreign universities, and seeking international recognition in global rankings, etc. (Hou, 2011).

Massification has expanded access to higher education in Taiwan, as it has in other Asian nations, but it has also increased public concern about the quality of institutions and students, which addresses national concerns to development of quality assurance (QA) and management. As Trow (1973) stated, “The steady expansion of higher education appears to some observers to constitute a serious threat to academic standards” (p. 35). By 2005, the total number of colleges and universities stood at 159, with more than 1.28 million students enrolled. The admission rate had risen to 57.6%. In response, the Taiwan government developed a national QA system of higher education to undertake regular reviews of universities and programs using a mandatory approach. Founded by the MOE and 153 universities and colleges in 2005, the Higher Education Evaluation & Accreditation Council of Taiwan (HEEACT) was commissioned to conduct external reviews over Taiwanese universities and colleges on a regular basis. In addition to HEEACT, several self-funded local and professional accreditors were founded to carry out evaluations of vocational education and selected professional programs, such as the Taiwan Assessment and Evaluation Association (TWAEA), the Taiwan Medical Accreditation Council (TMAC), the Institute of Engineering Education Taiwan (IEET), and the Chinese Management Association (CMA). Currently, there are five QA agencies and accrediting bodies recognized by the government of Taiwan. By 2016, more than 85 institutions and 3000 programs were under HEEACT’s review, and their detailed final reports were published on the HEEACT official website (Hou, et al., 2018).

- ***Equity and University Social Responsibility as Current Stage: 2016 to Present***

The 10-year implementation of national excellence initiatives and quality policy led by the former government has brought severe criticism, such as over concentration on world-class universities building, increasing inequality among higher education institutions, stricter governmental control. (Hou, 2012; Mok, 2016). In addition, university administrators and faculty members strongly complained about workloads and red tape derived from accrediting agencies (Hou, et al., 2018).

On May 20, 2016, Dr. Tsai Ing-wen, the chairman of the opposition party, the Democratic Progressive Party (DPP), was elected as the first female President of Taiwan, and DPP also gained a majority in the Legislative Yuan for the first time. The new administration faced an immediate range of economic, social, and political challenges, including pension reforms, energy development, youth unemployment, and the cross-strait relationship, as well as the issue of the widening gap in education inequality.

With the DPP Party’s emphasis on “universal human rights, transitional justice and constitutional reforms”, the Tsai administration believed that “all citizens are treated equally regardless of their gender, age, ethnicity and religion” (DPP, 2019). In particular, “the facilitation of the Taiwan identity awakening” and “the liberation of mind from the past authoritarian control” were urgent tasks (Wang, 2013, p. 1). The doctrine of “egalitarianism,” which emphasizes that people should be treated equally regardless of social class, ethnicity, gender, or other demographics, exactly corresponds to the DPP’s political vision (Zha, 2013). As soon as the new government took office, the MOE began to shift the focus to “university social responsibility,” “community engagement,” and “the partnership and collaborations with the institutions in the ASEAN countries.”

Table 1.1 Major policies and events in Taiwan higher education since 1945

Year	Policy and events	Universities	Colleges	Net rate
Colonial period (Japanese rule)				
1945	Taihoku Imperial University transferred to NTU	1	3	
	State control and educational reform: 1950–1985			
1950	Educational guidelines during nation's reconstruction period	4	2	
State control and educational reform: 1950–1985				
1953	The first four-Year Economic Construction Plan begins	4	5	
1964	Educational Plan in Taiwan	21	20	
1970	5 th National Education Meeting	22	69	
1972	Suspension of new applications for establishment of private higher education institutions	23	73	
1979	Teacher's Education Act	26	75	10.9
1985	Establishment of private schools allowed	28	77	13.9
Expansion and deregulation era (1986–2005)				
1988	6th National Education Meeting	39	70	16.0
1989	Expansion and deregulation as national agenda	41	75	17.2
1994	University Act Revised	58	72	26.3
	Teacher Education Act Revised			
	410 Education Reform			
	7th National Education Meeting			
1995	Teacher' Education	60	74	27.8
	Act for junior colleges upgrading into universities			
	National Education Report			
1996	Education Reform Report	67	70	29.1
1997	Moving Lifelong learning Society	78	61	31.1
1998	Education Reform	84	53	33.3
1999	Education Law	105	36	35.4
	National Endowment Act			
2001	White paper for Universities	135	19	42.5

(continued)

Table 1.1 (continued)

Year	Policy and events	Universities	Colleges	Net rate
2003	Higher Education Macro Planning Commission (HEMPC) proposal over “selection and concentration” policy	142	16	49.1
Pursuit of excellence and quality assurance golden age (2005–2016)				
2005	Development Plan for World Class Universities and Research Centers of Excellence Initiative	145	14	57.6
	Teaching Excellence Initiative			
	Establishment of Higher Education Evaluation & Accreditation Council			
2010	8th National Education Meeting	148	15	66.7
2011	National Education Report	148	15	68.4
2013	Whitepaper for Talent Cultivation	147	14	70.4
2016	Establishment of Taiwan Institutional Research Association	145	13	71.2
Equity and social responsibility—current stage (2016 to present)				
2016	New Southbound policy)	145	13	71.2
2017	Higher Education Sprout Project			71.31
2017	Program accreditation turned from compulsory into voluntary approach	153		
2018	Global Talent Recruitment Program (Yushan Scholar Program)			71.03

Source by authors

In 2017, the MOE launched a new initiative called “Higher Education Sprout Project” to replace the “Excellence Projects,” aiming to “comprehensively enhance the quality of universities and promote the diversification of higher education so as to secure students’ equal right to education. Besides, it expects to reinforce international competitiveness through facilitating universities to achieve world-class status and developing cutting-edge research centers” (MOE, 2018, p. 1). In contrast to the previous two cycles of excellence initiatives for the few selected universities, the new project awarded a total of 156 institutions with an egalitarian approach. Under the new scheme, all types of higher education providers are eligible for government funding. It is expected to accomplish the following four goals: implementing teaching innovation; developing universities’ features and uniqueness; improving public goods; and fulfilling social responsibilities (MOE, 2019c). Likewise, the new project attempts to strike a balanced between teaching quality enhancement and a focus on research outputs (Table 1.1).

Table 1.2 Basic data of Taiwan higher education from 1990 to 2018

Year	1990	1995	2000	2005	2010	2015	2018
Total population	20,401,305	21,357,431	22,276,672	22,770,383	23,162,123	23,492,074	23,588,932
Population under 18	6,954,328	6,671,072	6,173,541	5,550,472	4,915,037	4,365,974	4,084,081
Number of new born	337,042	326,547	307,200	206,465	166,473	213,093	180,656
Average GDP (USD)	8,205	13,119	14,908	16,456	19,197	22,780	25,792
Number of universities and colleges	121	134	150	162	163	158	153
Number of general universities	45	53	65	70	71	71	70
Number of universities of technology	76	81	85	92	92	87	83
Number of 4-year universities	21	24	53	89	112	126	127
Number of 4-year colleges	25	36	74	56	36	19	14
Number of junior colleges	75	74	23	17	15	13	12
Total university student enrollment	576,623	751,347	1,092,102	1,296,558	1,343,603	1,332,445	1,244,822
Number of undergraduate students	239,082	314,499	564,059	938,648	1,021,636	1,035,218	961,905
Student enrollment rate (%)	19	28	39	57	67	71	71
Number of teaching staff	22,071	31,195	40,202	47,317	50,213	48,407	46,590
Ratio of student to faculty member	26	24	27	27	27	28	27
HE expenditure (million USD)	58,498	100,444	177,668	221,581	225,910	245,633	NA

Source: Statistics Bureau, MOE

All in all, higher education in Taiwan in the two decades has undergone significant expansion, both with respect to increases in the number of institutions and the number of enrolled students. Amid flourishing economic development, social liberalization, and democratization in the 1990s, Taiwan's higher education system has decentralized: the state now exerts less control, while universities continue to seek more autonomy. By 2016, the number of higher education institutions has increased to 158, largely due to the upgrade of junior colleges to four-year universities. These quantitative increases demonstrate emphatically that higher education in Taiwan has transformed from an elite-type to a universal-type educational system (Martin, 1973; National Development Council, 2017) (Table 1.2).

1.4 Taiwan's Higher Education System, College Admission, Learning Outcomes, and Qualification Framework

The MOE in Taiwan is the highest administrative body responsible for national educational policymaking and implementation, with the aim of raising the overall quality of education and the nation's competitiveness (MOE, 2019a). In general, higher education in Taiwan features a dual track system of universities alongside polytechnics. General universities and colleges fall in the category of the university system, while the polytechnic system includes technological universities and colleges and junior technological colleges. The Department of Higher Education and the Department of Technical and Vocational Education under the MOE are in charge of the university and polytechnic systems, respectively.

Higher education institutions (HEIs) offer qualifications under the Degree Conferral Law. In other words, degrees are conferred pursuant to the provisions of this Law. Academic qualifications are categorized into four levels, including associate degree, bachelor's degree, master's degree, and doctoral degree. Although universities and colleges can determine the names and levels of the degrees they confer, they need to report to the MOE for approval. Taiwan's universities and colleges vary significantly in size, ranging from the largest with around 30,000 students, to the smallest with fewer than 1,000 students. It is noted that only 4-year universities and colleges provide educational programs above bachelor level. Junior colleges are counted as part of the higher education system, but they only award an associate degree (MOE, 2019b). According to Article 22, Enforcement Rules of University Act, each undergraduate program requires a minimum of 128 credits. However, specific professional programs may require a higher number of credits. For example, a program of Medicine requires a minimum of 241 credits, and a program of Dentistry requires a minimum of 208 credits. Eighteen teaching hours of in-class learning time (not including learning activities out of class) are counted as one credit. In most cases, the academic year constitutes two semesters, and a semester lasts for 18 weeks.

Normally, students on undergraduate programs take four years to be awarded a qualification, but some professional programs, such as medicine, dentistry, law,