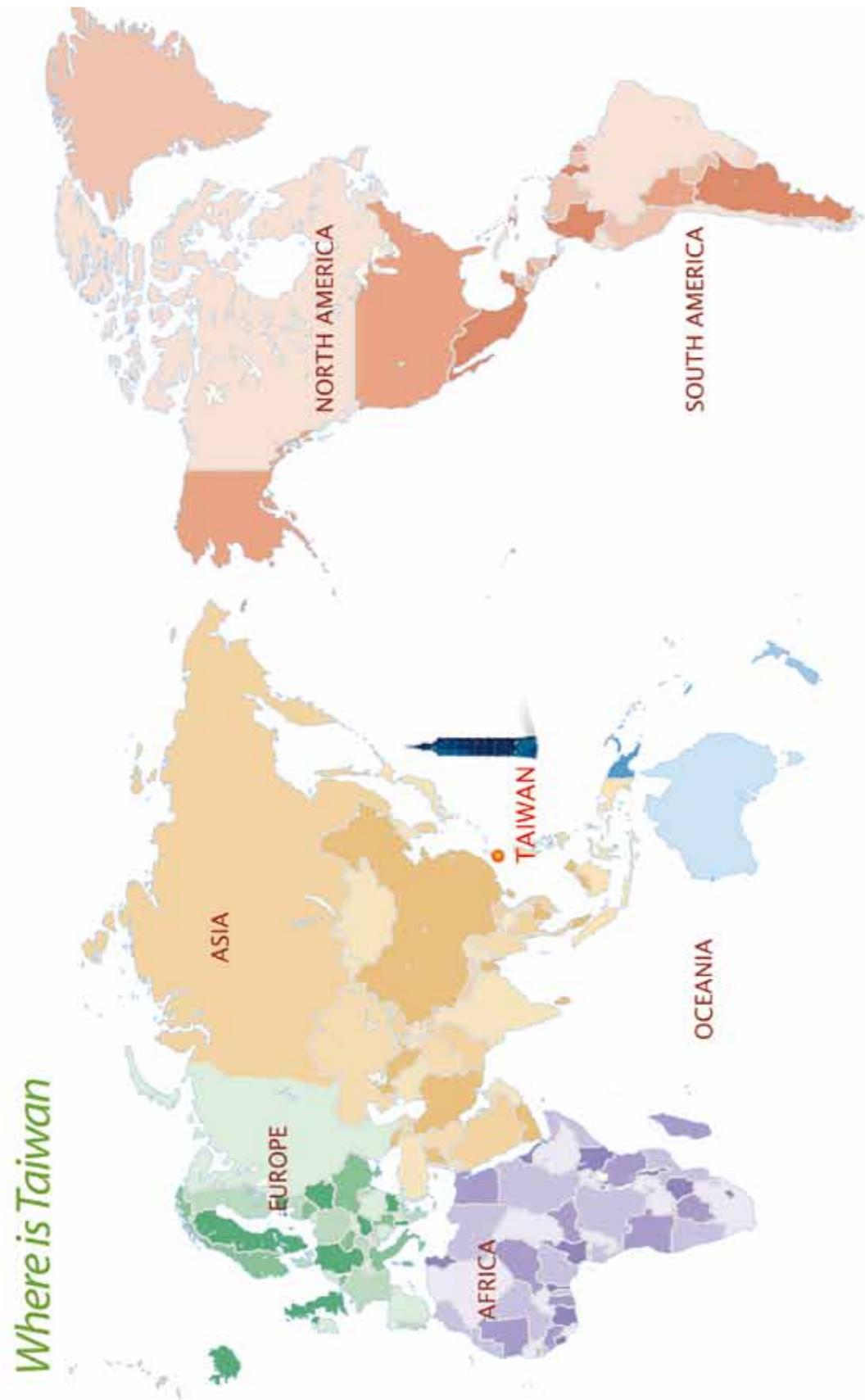


EDUCATION IN TAIWAN

2012/2013





Where is Taiwan

EDUCATION IN TAIWAN

2012/2013



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TO OUR READERS

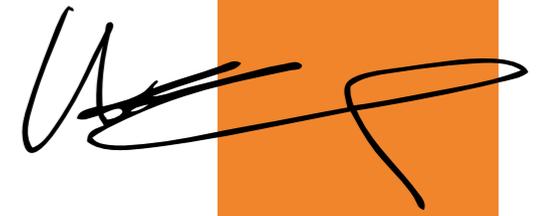
WORKING TO CREATE A NEW VISION FOR EDUCATION

Education is a lifelong endeavor, and we are dedicated to the development of the education system in Taiwan so as to leave behind a positive legacy for future generations. With new legislation in place for the integration of early childhood education and care, free schooling for children aged 5 and under, the imminent rollout of the 12-year Basic Education System, the export of higher education to promote Taiwan as a higher education hub, and forthcoming legislation amendments regarding the influx of mainland Chinese students opening a new chapter in cross-strait education communications, we see many new and rewarding changes taking place in the education system in Taiwan.

Building upon existing policy, the Ministry of Education is set to promote eight policies designed to further strengthen the education base and put educational ideals into practice. These eight policies include: priority integration of early childhood education and care, implementation of 12-year Basic Education, promotion of moral education and instructor role models, comprehensive support for underprivileged students, development of Taiwan as a hub for East Asian higher education, construction of a society of lifelong learning, promotion of exercise and better health, and nurturing of talent to strengthen international competitiveness.

The 21st century is the era of the knowledge economy, where the power of knowledge determines the supremacy of a country. To increase our overall strength, we must nurture talent that can compete with the rest of the world. In Taiwan, higher education is not only widespread, it has also achieved international standards. The global rankings of Taiwanese colleges and universities are impressive, as seen in the World University Rankings of UK-based Quacquarelli Symonds, the Times Higher Education World University Rankings, or the Shanghai-based Academic Ranking of World Universities. In the area of research, in 2011 Taiwanese universities were rated in the top 1% in 17 of ESI's 21 categories for scientific papers. Collaboration between education and industry has seen a steady rise in the areas of IP management, technology promotion, and collaborative research. In the future, the MOE hopes to develop Taiwan as East Asia's hub for higher education, budgeting NT\$1.3 billion annually and aiming to "foster a friendly environment for overseas students", and "strengthen Taiwan's links with Southeast Asia".

team-driven, innovative, communicative and practical attitude to achieve government policy objectives related to education, and to draw on the experiences of the past to create a new vision for education and achieve our vision of education. We want to create a quality education environment and nurture talent with the ability to compete at the international level.



*Dr. Wei-ling Chiang
Minister of Education
September 2012*

After years of careful planning and preparation, legislation for the MOE and its subsidiary structure was passed in 2012. This act is important for its impact on the restructuring and re-envisioning of the organizational structure of our core education system. In the face of rapid changes in our society and swift turnabouts in global dynamics as well as the expectations our public holds towards educational development, the new structure will be more efficient in fostering collaboration between branches, creating a more flexible, accurate and efficient central education administrative organization that can adapt to changes and challenges, in the hope that improvements in education will lead the way to improvements in the nation.

Education is the foundation of national growth, and the quality of education determines the competitiveness of a nation. The MOE hopes to promote educational policies that reflect a





AN OVERVIEW

The Ministry of Education is part of the Executive Yuan and is responsible for national academic and educational administration, including education policy planning and legislation and supervision of educational matters. To improve the efficiency of our government, recent organizational restructuring has been carried out with the Ministry of Education Organization Act passed Feb. 3, 2012 and set to go into effect Jan. 1, 2013.

Education has always been highly valued in Taiwan. Our education system is currently a 6-3-3-4 structure which offers compulsory education as well as teacher training and vocational education. Kindergarten age is roughly four to six, and although kindergarten attendance is not part of compulsory education, the government provides assistance to toddlers in poor families to enter the school system early, which has led to an increase in the number of pupils in kindergarten. On Jan. 1, 2012, kindergartens and nurseries were integrated as preschools in the education

system. Elementary school lasts for six years, from age 6 to 12; junior high school three years, from age 12-15; (compulsory education was extended from 6 years to 9 years in 1968, to include junior high school; in 2014 the period will be extended to 12 years to cover senior high school) senior high school three years, age 15-18; university undergraduate education is four years, masters level graduate education one to four years, and doctoral education two to seven years. In addition, to offer the general public a broader range of continuing education options, there is also supplementary education and continuing education as well as special education for students with special needs due to extraordinary talent or mental/physical disability. Widely available life-long learning courses give the general public an opportunity to extend their learning experience.

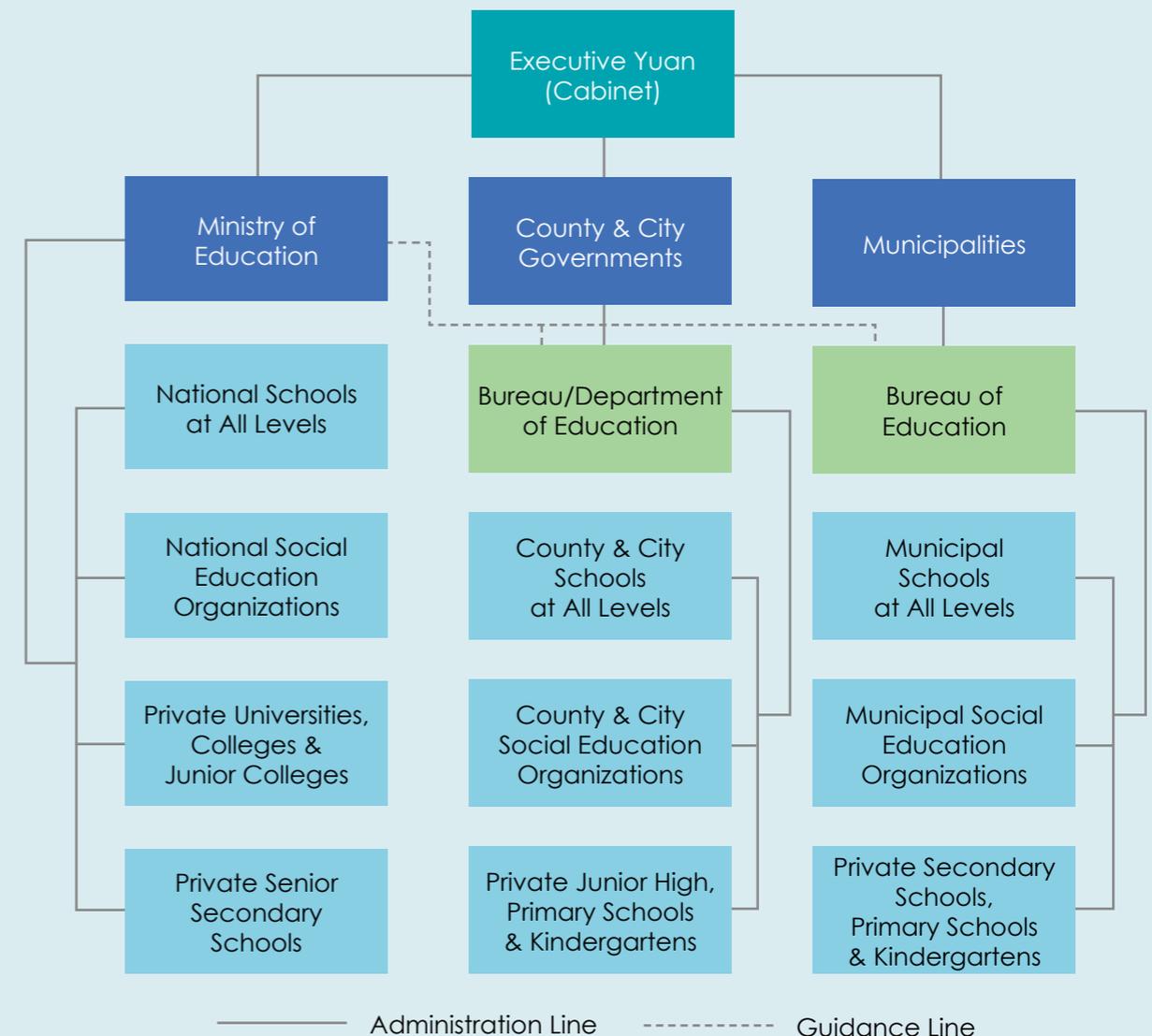
Currently the total number of schools at all levels (including kindergartens and nurseries) is about 8,100, making for a distribution ratio of 224 schools per 1,000 square kilometers. The total number of students is 4.86 million, making for an average of 209 students per 1,000

in the general population. The total number of teachers is about 270,000, meaning each teacher teaches an average of 18 students. In recent years the density of schools has increased, while the number of students per teacher has decreased, and the total number of students at the college level or above has increased. At the same time, the literacy rate of the population 15 years old and above reached 98.2% at the end of 2011, of which 69.7% had an education level of senior high school or higher.

Different stages of education ought to focus on different aspects of development. Therefore we

hope to achieve “healthy and happy growth for pre-schoolers”, “a happy and lively learning experience for elementary school students”, “balanced and well-rounded development for junior high school students”, “increased general knowledge for senior high school students”, “development of basic skills for vocational high school students”, “professional knowledge acquisition for university students”, “professional skills nurturing for vocational college students”, “independent research skills for graduate students”, “lifelong learning for the general public”, and “cultural adaptation for new migrants”.

THE EDUCATION ADMINISTRATION SYSTEM 2012



EDUCATIONAL SYSTEM

Students may study, under the current education system, for up to 22 years, which includes 2 years of preschool education, 6 years of primary education, 3 years of junior high school, 3 years of senior high school, 4 to 7 years of college or university, 1 to 4 years for a master's degree and 2 to 7 years for a doctoral degree.



Compulsory Education

A 9-year Compulsory Education system was put into effect in 1968, of which 6 years are for elementary education and 3 years are for junior high school. To offer more diverse opportunities for junior high school students, technical arts education is included as well. Practical classes allow students to better understand future vocation and career choices. Compulsory education will be extended to twelve years in 2014.

Senior High School and Vocational Education

This category includes senior high schools and vocational high schools and consists of three years of schooling. Senior high school includes "ordinary senior high schools," "comprehensive senior high schools," "magnet senior high schools," and "experimental senior high schools." Vocational high schools offer a special curriculum with general high school courses as well as classes in practical skills, classes in industry-related subjects, and cooperative education programs, all designed in line with the various needs of students for a balanced vocational education.

Junior College Education

Vocational school education can be classified according to admission requirements into 5-year

junior colleges and 2-year junior colleges. 5-year junior colleges admit graduates of junior high schools, whereas 2-year junior colleges admit graduates of vocational high schools.

Teacher Education Programs

The teacher education system, comprising multiple providers, serves to screen potential teacher candidates and establish a pool of prospective teachers. Teachers who teach kindergarten, primary school, junior high school, and senior high school are trained in teachers colleges or universities with teacher training programs or centers. These institutions are also responsible for providing in-service training and guidance for local education practitioners.

University/College and Graduate School Education

The maximum study period for university education (including universities, colleges, universities of technology, and technical colleges) is 4 years (the Post-bachelor Second Specialty Program is 1-2 years, while the Associate Degree offered by technical colleges is usually 2 years), and internships can last one-half to 2 years depending on the needs of the subject. For Master's Degree candidates, the study period is 1-4 years and for Doctoral Degree candidates the duration is 2-7 years.



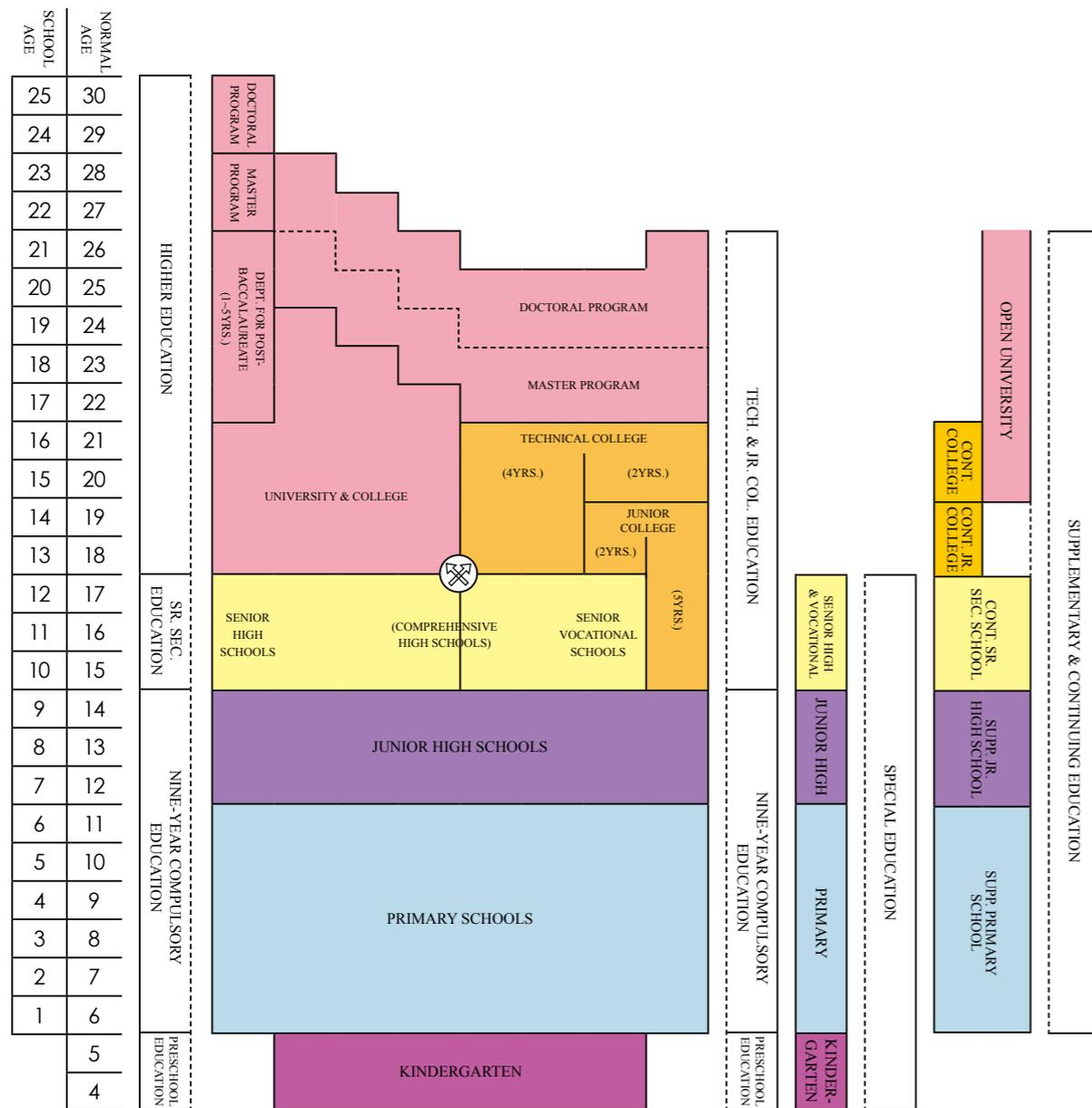
Special Education

Special education institutions are established for students with mental and/or physical disabilities, and offer education at the levels of kindergarten, primary school (6 years), junior high school (3 years), and senior or vocational high school (3 years). Moreover, schools not exclusively dedicated to special education may also offer special education classes. Additionally, there are also resource rooms in universities to guide and to support students with disabilities.

Supplementary and Continuing Education

Supplementary and continuing education institutions provide extensive and comprehensive learning opportunities for the general public. This kind of education can be divided into general supplementary education, continuing education, and short-term supplementary education.

THE CURRENT SCHOOL SYSTEM



A . Priority integration of early childhood education and care

To ensure quality preschool education, kindergartens and nursery schools will be merged into preschools that accept pupils 2 to 6 years of age. Relevant legislation is in the making to establish a combined system of education and care to provide a quality and safe preschool environment.

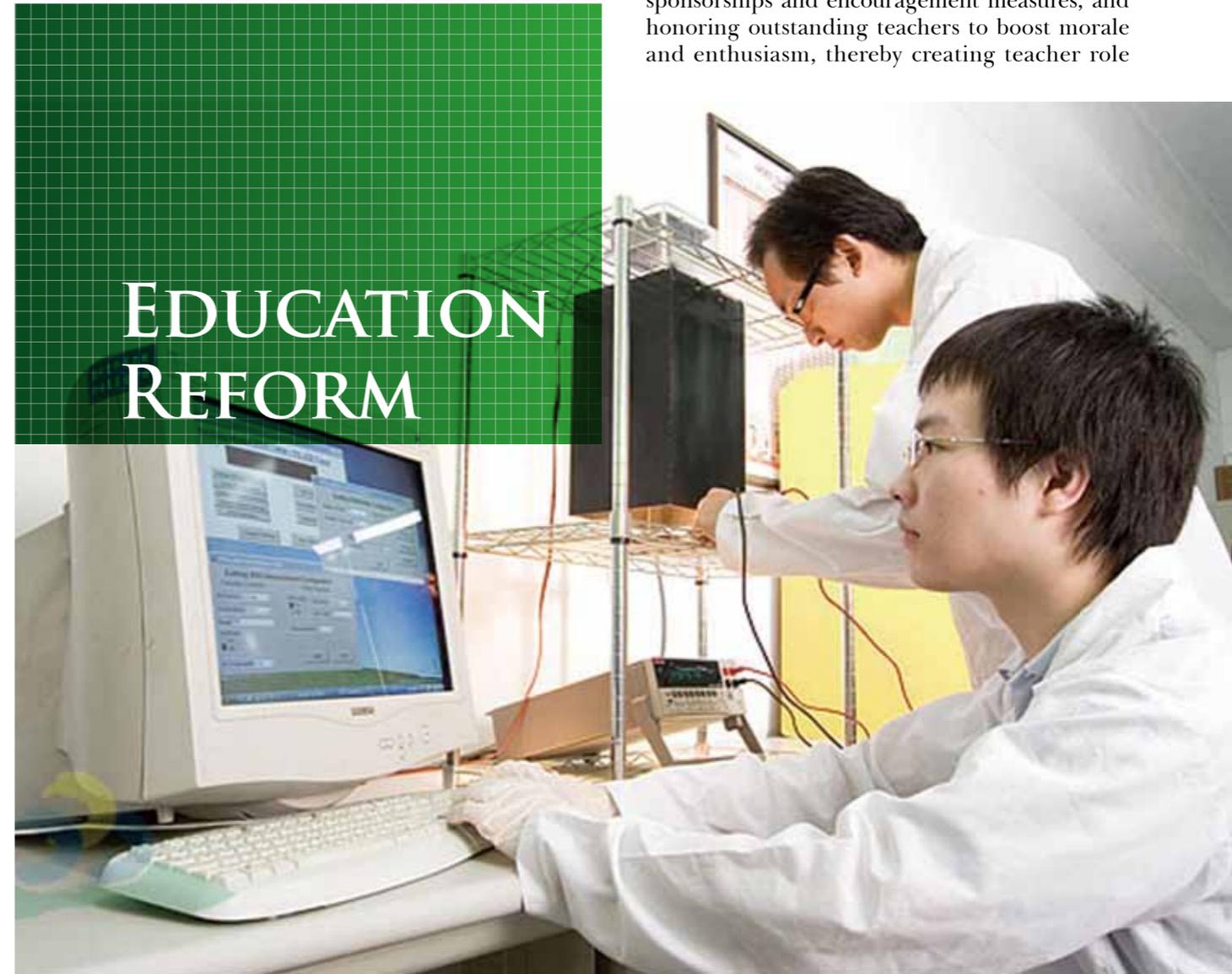
B . Implementation of 12-year Basic Education

A 12-year Basic Education system will be put into effect in 2014 to increase the number of students

and the length of education, thereby improving the quality of the education environment. Education will be universal and tuition-free, and enrollment will not require admission tests. Additionally, the MOE will restructure enrollment regulations and tuition fee policies, redraw school districts, enhance guidance counseling, and seek funding for the changes proposed.

C . Promotion of moral education and instructor role models

This will be done in several ways: by setting policy for teacher training and professional development, rewarding outstanding teachers in remote areas by offering government sponsorships and encouragement measures, and honoring outstanding teachers to boost morale and enthusiasm, thereby creating teacher role



models. To strengthen moral education, teachers are encouraged to ask students to practice good behavior in daily life, such as performing a good deed daily or serving as community volunteers.

D . Comprehensive support for underprivileged students

This includes improving the education environment of Taiwan’s indigenous peoples and promoting the talented among their tribesfolk, helping the offspring of immigrant spouses adjust to their new environments and encouraging them to participate in multicultural activities and lifelong learning, implementing support for underprivileged groups and reducing the gap between urban and rural areas by improving teaching quality in remote areas, ,and providing flexible and individually-tailored educational services to serve students with special needs.

E . Development of Taiwan as a hub for East Asian higher educations

Main measures here include providing university scholarships for international students, increasing the number of classes taught entirely in English, establishing administrative support for overseas enrollment and recruiting more Southeast Asian students, as well as collaborating with Southeast Asian nations that may want to send their high-ranking officials to Taiwan to pursue professional development.

F . Construction of a society of lifelong learning

This includes promotion of lifelong learning under the code name 331: exercise at least 30 minutes a day, study for 30 minutes each day, and perform a good deed daily. Multi-purpose



learning centers will be built at key locations in cities and the countryside. Adult basic education workshops will be held to reduce the rate of illiteracy. Public libraries will be made more accessible to the general public so as to promote reading. Diverse learning options will be provided to senior citizens in anticipation of the aging of Taiwanese society.

G . Promotion of exercise and better health

Increase the number of physical education classes in elementary and secondary schools and enhance students’ swimming ability and physical fitness. Utilize free space in schools to build exercise areas and facilities so as to create a campus where students can exercise whenever and wherever they want. Set up a streamlined system for identifying and developing athletic talent.

H . Nurturing of talent to strengthen international competitiveness

This includes promotion of compulsory education and lifelong learning to improve citizens’ living standards and increase international competitiveness. To assist in the recruitment of global talent, the MOE will revamp its regulations regarding the pay scale for foreign nationals and ease requirements for work eligibility in Taiwan. Furthermore, the MOE will work to improve students’ foreign language skills, enhance their international outlook, and strengthen exchange programs with top universities around the world to encourage more Taiwanese students to study abroad.



COMPULSORY EDUCATION

A.General Information

The infrastructure of a country and the development of its economy are a function of the country’s cultivation of manpower and talent. This requires long term, continued investment and needs to start from the very bottom. The government set the length of compulsory education at 9 years in 1968, and will further extend it to 12 years in 2014, which will help nurture and develop the manpower needed for economic growth.

Ensuring that all toddlers receive proper preschool education is a major objective of our educational policy. Kindergartens are preschool institutions set up in accordance with relevant legislation for children aged 4 and above up until the eligible age for elementary school, and are supervised by education administrative authorities, whereas nurseries are welfare organizations set up in accord with children

and teenager welfare legislation that accept toddlers aged 2 to 6 and are supervised by social administrative authorities. The talks and negotiations for merging nurseries and kindergartens started in 1997, and culminated in the Early Childhood Education and Care Act passed on June 29, 2011, to be put in place beginning Jan 1, 2012.

B.Preschool and Compulsory Education Structure

The Early Childhood Education and Care Act is a revolutionary move in our preschool system. After the bill was enacted on Jan 1, 2012, nurseries and kindergartens were redesignated “preschools”, in which toddlers from the age of 2 onwards are given complete and thorough education and care in the preschool until they enter elementary school. This bill consolidated the education and care of toddlers under a single administrative system, putting into practice a



toddler-centered strategy that focuses on the toddler's best interests. Taiwan is also the first country in Asia to consolidate the two systems.

According to statistics by UNESCO, there are over 40 countries in the world that have a basic education system that exceeds 10 years. The main reason for this is that many non-developed countries have noticed that basic education is directly connected to national competitiveness.

Put into practice in 1968, Taiwan's 9 year Compulsory Education system is free and

obligatory. Legislation states that citizens from the age of 6 to 15 should receive compulsory education; which is divided into two stages – the first 6 years at the elementary school level, and the latter 3 in junior high school. However, this system has been in place for over 4 decades. When first put in place, there were fewer than 10 countries worldwide with more than 9 years of compulsory education in place, making us one of the forerunners. Compared with developed countries, however, the number of years was not that high. To solve the current educational conundrum and enhance the development of national manpower, a 12 year Basic Education system will be adopted in 2014, a new landmark for our education system.

C.Preschool and Compulsory Education Policies

Under Taiwan's educational setup, preschool education is not compulsory. The education and care of preschool-aged toddlers was originally provided by, respectively, kindergartens and nurseries, largely consisting of privately-



established institutions. As the two systems were separate and had different supervisory administrative units, they evolved different set-up standards and have different regulations regarding personnel and curriculum. Thus toddlers of the same age often received inconsistent education and care at different institutions. Also, internationally, the trend of offering edu-care service has become a common scene. We thus started to promote the integration of early childhood education and care.

To stimulate the development of junior high and elementary school education and improve its quality, and lay the groundwork for course planning, fundamental research in the development of elementary and junior high school curricula was carried out and added to the 12 year Basic Education policy strategic plan in 2012 to allow the National Academy for Educational Research to improve the teacher supervisory system and follow through with remedial instruction.

With increasing globalization in recent years, many nations are experiencing a growing income



gap between the wealthy and the poor as well unequal resource distribution between town and country. Geographical factors and rapid changes in society can lead to uneven distribution of educational resources, causing an educational imbalance between town and country and depriving minority groups of equal access. To solve these regional education issues and bridge the resource gap between different locations, we are working to put the following into practice: reasonable distribution of educational resources, equality in educational opportunity, and realization of equal education and a just and fair society.

Another key strategy is the idea of social care and assisting in the education of children from economically disadvantaged families. Currently there are 3,115 public senior high schools, vocational high schools and junior high schools as well as elementary schools participating in the Promoting School Education Savings Account project nationwide, which authorizes the schools to receive charitable donations. Many philanthropists in both business and society have been long term donors to children in the program, a testament to the generosity of the people of Taiwan.



School Lunch Program

To ensure that economically-disadvantaged students do not go hungry, the government has budgeted an allowance for four categories of students: those from lower income families, those from medium-to-lower income families, those with families emergencies, and also cases referred by a student's advisor (including families put through involuntary unemployment for over a month, unpaid mandatory leave, and those in which either parent may have a form of physical or mental disability). Meals for these public school students in junior high school and elementary school are paid for from this special allowance during the school term, as well as when the students show up for classes in summer and winter vacation programs, so as to provide the student with at least one decent meal a day, helping him/her to avoid malnutrition due to lack of lunch money. Since 2011, the scope of this project has been further broadened to include students from lower income families who do not join the summer and winter activities.

Good health is the foundation of successful learning. The Ministry of Education pays much attention to the health of students, and thus considerable effort is put into the quality of school lunches. Food hygiene and nutrition experts observe school lunch preparations; relevant authorities carry out joint inspections of lunch providers as well as food ingredient suppliers; and food ingredients are regularly inspected and tested. Evaluations of school lunches are constantly being improved upon: local governments carry out regular inspections, and the skills of school lunch personnel are being upgraded.



Swimming Education

In 2008, the average number of swimming pools available per 100,000 students in Taiwan was 9.6, significantly lower than that of Japan, which is 188. In 2009 out of all graduates from senior high school and lower level educational institutions, the percentage of those who could swim was a measly 42%. In light of a shortage of swimming facilities and uneven distribution of such facilities between rural and urban areas, which has hindered the promotion of swimming education, and in consideration of health, safety and well-being, the MOE has launched "The Swimming Project – Improving Student Passing Rates in Swimming Tests and Building New Swimming Pools", which is set to last 12 years, the first 4-year stage of which will be from 2010-2013.

The objective of the project is primarily the improvement of existing swimming pools and the increase of their usage rates, together with reactivation and rebuilding. The second step is to fund warm-water pools so as to lengthen the period of use annually for each swimming

pool. Then, in accordance with the needs of the different cities and counties, the MOE will provide funding for new swimming pools, looking at both effective use as well as bridging the gap between rural and urban areas and giving students everywhere more chances to swim. The goal is to achieve raise the percentage of senior high school (and below) graduates capable of swimming to 80% by the year 2021.





Hua Nan Elementary School infuses daily life into courses

Facing the threat of closure because of a shrinking student population, Hua Nan Elementary School has tackled the crisis head-on with innovative courses in subjects like coffee, cycling, stream tracing, and mountain-climbing – programs of study that combine a variety of features from topics encountered in local life.

Located in a mountainous area in Gukeng Township of Yunlin County, an area famed for its coffee products, Hua Nan initiated courses in 1996 that incorporate this specialty, along with others that highlight its geographical characteristics.

Principal Chen Ching-Chun believes that infusing a conventional curriculum with localization features will help to broaden the viewpoints of students in the school.

Lectures and training on the subjects were further introduced to community residents in 1997 to build a collaborative platform with the neighborhood. The strategy proved to work and has attracted a soaring number of

participants, with more than 10,000 learners attending the courses provided to the community in 2011 alone.

The cycling course, in particular, leads children out of the classroom and into a much broader world. This year these young students rode their bicycles all the way to Kenting in southern Taiwan. On the journey they interviewed, recorded, filmed and wrote down what they saw.

“We hoped the activity would advance children’s understanding of the variety of lifestyles that can be found on the island,” says Principal Chen.

With school fences no longer serving as a border that defines the limits of courses, Hua Nan’s students now project their learning experiences into the community. They conduct interviews with senior residents, design posters; play the ocarina, and screen documentary films for residents, just to name a few of their new-found interests.



Not one less at San Wan Junior High School

Every student is considered precious at San Wan Junior High School, and no child will be left behind as a system of remedial instruction is launched to help students who fall behind in their course work.

The school was founded in 1956 as the highest level educational institution currently available in San Wan Township in Miaoli County. Currently, over 40 percent of the students attending San Wan Junior High School come from disadvantaged families.

A course rich in variety and designed by passionate teachers has been outlined to drum up interest among students and improve their learning efficiency. Teachers of the same subject have teamed up to use, develop and formulate an e-technology course.

Holding to the belief that children will make progress when they feel love and care from others, the teachers have incorporated courses, games and teaching methods that will provoke students’ passion for learning and rebuild their confidence as well. In the end, 90 percent of students attending the courses have seen their

grades improve, and 98 percent have shown a positive learning attitude.

One indigenous student attending the courses says teachers are patient and caring, and that classmates get along well.

“What matters isn’t just that their grades have improved, but also the feeling that they have not been given up on,” says Principal Chung Wan-hsing. “Although it takes a great effort to achieve these goals, it is worthwhile.”

Seeing the improvements in both grades and learning attitudes, parents of these students are inspired to adjust their ways of getting along with their children and are also devoting more attention to their children’s education.





SENIOR HIGH SCHOOL

Senior High School

Senior high school education is designed to cultivate physically and mentally sound citizens, laying the foundation for academic research and the acquisition of professional knowledge in later years. Senior high schools can be divided into “ordinary senior high schools,” “comprehensive high schools,” “magnet senior high schools,” and “experimental high schools.” Students who graduate from junior high school or have an equivalent education level can gain admission to senior high school through methods such as examination-free entrance, application, recommendation and screening, and registration and placement. 160 credits are required for graduation.

A. Promoting 12-year Basic Education:

(1) The Ministry of Education has long been planning for the launch of 12-year Basic Education, and since 2008 has been implementing the 12-year Basic Education Precursor Program.

(2) To allow junior high school education to become more adaptive, creative, active, superior and quality-driven, and to enhance the quality of high school and vocational high school education, President Ma Ying-jeou announced as part of his New Year’s speech for the ROC’s Centennial Celebration that beginning in 2014, all senior and vocational high schools will be tuition-free, and most students can enroll in school without having to pass an entrance examination.

(3) Key objectives for the year 2012~2013: Promote the “Implementation Plan for 12-year Basic Education” approved by the Executive Yuan and ensure that it is completely and effectively carried out.



B. Advanced science education and cultivation of talent in the science:

(1) Taiwan has achieved outstanding results in the international Mathematics and Science Olympiad. Domestic mathematics and science competitions are frequently held for senior high school students, and there are also science talent cultivation plans and domestic and international exhibitions to stimulate interest and learning in the sciences.

(2) Key objectives for the year 2012:

—(i) Continue training students for the Math and Science Olympiads, and organize similar domestic competitions in mathematics and information technology for junior high school and senior high school students.

—(ii) Plan to host the 26th International Olympiad in Informatics in 2014.

—(iii) Continue supporting secondary and elementary education projects in science and cultivation programs for scientific talent.

—(iv) Set up science programs in senior high schools and monitor the effectiveness of the programs.



C. Bring second foreign language education into practice and improve students’ international awareness:

(1) The main goals of the third 5-year plan to “Improve Second Foreign Language Education in High Schools”, launched in 2010, include:

—(i) Encouraging and schools to adopt the plan and offering them support.

—(ii) Strengthening the promotion mechanism for the second foreign language education system.

—(iii) Creating a second foreign language learning environment.

—(iv) Improving the teacher recruitment system.

(2) In 1999, a total of 22,623 high schools students chose to enroll in a second foreign language, a number which ballooned to 89,306 by 2000. In 2000, fourteen colleges and universities applied to offer 28 advanced placement foreign language classes for high school students, which is 16 more classes than were offered in 2008.

(3) Key points for the year 2012~2013: Continue encouraging schools to teach more foreign languages and offer more foreign language classes in order to cultivate talent and increase international competitiveness in the area of languages.

Vocational High School

Vocational high schools serve to cultivate technical personnel with professional knowledge and practical skills, and to help students lay the foundation for their future careers. To meet the rapidly-changing demands of students and industry, the following programs have been adopted:

+ Vocational Schools

Vocational education is credit-based, with 160 credits required for graduation. Curriculum planning focuses on meeting the needs of the rapidly-changing industry. Graduates can choose to continue with studies at a university of technology, technical college or two-year junior college, to enter the job market, or to start one's own business.



+ Practical Skills-based Curriculum

These programs impart practical skills upon students who studied in technical arts classes in junior high school, providing them with the means to enter the job market and secure employment. Instruction is provided via day classes or evening classes, and student are eligible for graduation after completing 150 credits in 3 years.

+ Cooperative Work Experience Education (Alternative Classes)

These classes were first implemented in 1969. Students study general subjects and theory at school while receiving hands-on training in the workplace. This approach was extremely popular in past decades. Now, in response to the changing environment, the Ministry of Education has published "Implementation Guidelines for Cooperative Work Experience Education in Vocational High Schools," changing the hour-based system into a credit-based system. Students can graduate after completing 150 credits in 3 years.



Chang Bo-jyun, 16, Freshman, National Taichung First Senior High School

Taiwan students shine in international science competition

Six students representing Taiwan competed in the 2011 International Junior Science Olympiad (IJSO), a competitive examination open to students under 16 years old from all over the world, finishing first as a team and bringing home six gold medals and two special awards.

Among them, Chang Bo-jyun, a freshman at National Taichung First Senior High School in central Taiwan, won a gold medal and an additional Best Theoretical prize.

The young science lover attributes his accomplishments so far to his parents, who helped inspire his interest in natural science. Chang recalls that when he was little his parents often took him to the National Museum of Natural Science. There Chang learned basic theories and developed a particular fondness for experimenting. "The experience helped to lay a solid foundation for me in science education," says Chang.

Chang considers the experience he gained in competing with his international peers very helpful in broadening his horizons and improving his capabilities. In the field of experimenting, however, Chang sensed a disadvantage among his teammates.

Hung Chih-ming, an associate professor at National Taiwan Normal University who trained the Taiwan team, agrees by noting that none of the prizes won were in the experiment category even though the Taiwan team finished first. "The result indicates that Taiwan contestants need to have more hands-on experience to sharpen their capabilities," says Hung.

The IJSO is designed to cultivate young students' interest in the scientific subjects of Mathematics, Physics, Chemistry, Biology and Earth Sciences.





Food and Beverage Management Department, National Tainan Chia-Chi Girls' Senior High School

Creative foods invented to promote Taiwan delicacies

In an effort to counter-balance a CNN report that brought notoriety to Chinese 'thousand-year-old eggs', a group of students from National Tainan Chia-Chi Girls' Senior High School teamed up and invented a product to once more challenge foreigners' taste buds.

Their brainchild – a cake filled with mushrooms, stewed meat, and chopped thousand-year-old egg, in various colors and decorations—won them first place in a nationwide project competition in 2012 for high school students.

“The critical point in making the product is to minimize the stench of the thousand-year-old eggs while preserving their distinct aroma,” says Chen Mei-cheng, a student in the five-member team who is currently enrolled in Chia-Chi’s Food and Beverage Management Department.

The reinvented traditional Chinese food later was proven to be more acceptable to the global palate as a survey conducted by the team showed more than ninety percent of foreign respondents were positive about the taste.

“Taking part in the contest has provoked my interest in production, and it may be a direction for me in the future,” says team member Hu Ya-yin.

With strong government policies and support backing them up, the number of students aiming for the food and beverage field has shown a rapid growth in recent years, observes Lin Pei-yi, the instructor of the team for the competition.

“Training students with a good attitude and a professional work ethic to work in the field is one of our key tasks,” she says.

HIGHER EDUCATION

Taiwan enjoys excellent global competitiveness in spite of limited land and natural resources. According to the World Competitiveness Yearbook 2011 published by the International Institute for Management Development (IMD) in Switzerland, Taiwan ranked sixth overall in global competitiveness among 59 countries, and was notably outstanding in “Economic Performance” and “Business Efficiency.”

One reason for Taiwan’s economic prowess is its quality human resources, an accomplishment closely tied to the issue of higher education. In the competitiveness evaluation report of the World Economic Forum (WEF) published in 2011, Taiwan ranked tenth in “Higher Education and Training.” Taiwan’s human resources provide highly-qualified workers in sufficient supply to the labor market and brings positive benefits for industry innovation.



◆ Universities and Colleges

Higher education institutions in Taiwan include 2-year junior colleges, 5-year junior colleges, and universities. Like most countries, the study period is 4 years for an undergraduate university degree, 1 to 4 years for a masters degree, and 2 to 7 years for a doctoral degree.

The popularization of education has led to a rapid increase in universities, colleges and student enrollment numbers, although the figure has levelled off in recent decades. In the 2011 academic year there were 163 universities and colleges and 1,352,084 students.

Reforms in teacher training has played an important part in the expansion of higher education. Significant improvements in teacher quality can be attributed to policy adaptations and the newly implemented evaluation system. Currently, Ph.D. degree holders account for over 80% of faculty in universities, the figure having increased by 15% in the past 10 years. Professors account for one-third of all teaching personnel.

To maintain competitiveness, Taiwan's government has invested \$300 million in higher education annually to encourage universities to enhance their standards for research and teaching, and the results have been remarkable.

Although Taiwan's higher education system has gained recognition for its achievements in many areas, tuition still remains very reasonable. Tuition is \$1,924 dollars per year at public universities, and \$3,552 dollars at private universities. College tuition stands at only 10~20% of the national per

capita GDP, considerably lower than that of many other countries, which in some cases is over 30%.

The Ministry of Education and several universities have jointly established the Higher Education Evaluation and Accreditation Council of Taiwan to conduct evaluations of universities. This evaluation consists of Institutional Evaluation and Program Evaluation. The former is held every 5 years to examine whether schools have achieved their strategic goals, while the latter examines the quality of faculty, teaching, research, and service. The Ministry also encourages universities to obtain international certification. The Higher Education Evaluation and Accreditation Council of Taiwan, for example, is a member of several international organizations, such as the Asia-Pacific Quality Network (APQN) and the International Network for Quality Assurance Agencies in Higher Education (INQAAHE).

Another of Taiwan's significant achievements is in the area of "Innovation". In a report from the World Economic Forum (WEF), Taiwan ranked ninth among 133 countries in innovation. To encourage students to unleash their creativity, the Ministry screens and selects outstanding students to study abroad under sponsorship by the government. In recent years, students from Taiwan have been making their mark in international design competitions such as Germany's iF Awards and Red Dot Award every year.



More Signs of Progress in Education

Everywhere around the world competition is getting fiercer and more talent is migrating across borders. How can Taiwan's higher education industry face up to these challenges so as to promote commercial innovation while strengthening Taiwan's international competitiveness?

Knowledge and innovation is the only way to increase global competitiveness. Countries the world over spare no effort in investing in the cultivation of innovation and talent by improving their higher education systems. Thus since 2006, the Ministry of Education has invested NT\$50 billion to launch a plan to develop world-class universities and research centers. After 5 years, we are now reaping the rewards:

1. Taiwan is reaching out to the world

Many of Taiwan's universities are ranked in the World's Top 100 universities in global university rankings. Moreover, according to global university rankings by the UK's Times Higher Education Supplement and Quacquarelli Symonds (QS), National Taiwan University has been in the Top 100 every year since 2007 while other universities have broken into the lists as well.

2. The quality of students continues to improve

Top universities in Taiwan have instigated reforms in their general education systems and interdisciplinary programs. Currently, there are 55,475 students enrolled in interdisciplinary programs. The universities are also fulfilling

their social responsibilities, as seen in actions like support of disadvantaged students. There are currently a total of 11,065 disadvantaged students enrolled in colleges and universities, a figure growing at an average rate of 17% annually. In addition, the top universities have also responded to public outcry at poor higher education quality, promising to improve the learning environment and boost student motivation to enhance the quality of university students.

3. The University is becoming a place for innovation in business

Taiwan's innovative ability has been recognized in the global competitiveness report published by IMD. In recent years, the number of patents and new breeds developed by Taiwanese universities has grown by 78%, and income from intellectual property rights has increased by 139%. This momentum will in turn stimulate more innovations and increase contributions to society.

4. Campuses play host to the world

"Internationalization" is key to global visibility. Whether the universities in a country are attractive to foreigners is also a criterion in evaluating national power. In the past 5 years, more than 30,000 foreign scholars have visited Taiwan, and nearly 30,000 foreign students are studying in Taiwan's top universities. On average, almost 400 international conferences are held in top Taiwanese universities each year, thereby broadening the horizons of Taiwanese students.

◆ Vocational and Technological Colleges and Universities

The institutions in this category include junior colleges, technical colleges, and universities of technology, accounting for a total of 91 schools. Junior colleges are divided into 2-year programs and 5-year programs. Technical colleges and universities of technology can admit students for associate degrees, bachelor degrees, and masters degrees, while universities of technology can also accept Ph.D. students.

In accordance with government policy, the key points for development in these schools are:

1. Implement multiple-route admissions

Vocational and technological colleges and universities recruit students through separate examination and enrollment systems:

—(1) 5-year junior colleges recruit graduates of junior high schools. Entrance methods include examination-free entrance, application and drawing lots, and placement.



2. Enhance teaching quality: promotion of government programs, enhancement of teaching quality, and adoption of a practical approach towards teaching

—(1) Implement the Program for Promoting Teaching Excellence for vocational and technological colleges and universities, the goals of which are: 1. Enhance professional teaching skills; 2. Strengthen curriculum design; 3. Strengthen student motivation; 4. Set up teaching evaluation systems; 5. Implement and/or improve all areas related to teaching quality.

—(2) Establish areas of specialization for each school

Since 2001, subsidies have been provided to establish areas of specialization for each school. Many have now established specialties and expertise in various professional realms.

—(3) Strengthen teaching and learning abilities
 1. Offer subsidies for instructors to gain work experience in public and private firms.
 2. Recruit from industry to enhance teaching.
 3. Promote off-campus internships.

—(4) Encourage students to participate in various competitions

—(2) The 4-year colleges/universities and the 2-year junior colleges employ the following methods: 1. screening by skill; 2. recommendation; 3. registration and placement; 4. The Star Plan, which is designed to balance the gap between urban and rural areas and support disadvantaged students in remote areas; 5. application using the Subject Competence Test for a given year and other written reviews.

—(3) Two-year colleges accept the graduates of five-year and two-year vocational schools through several methods: 1. recommendations of students with outstanding skills; 2. registration and placement; 3. individual recruitment.

Since 2010, outstanding students have been able to apply for airfare subsidies to take part in international competitions and exhibitions.

—(5) Encourage professional certification
 Instructors and students are encouraged to obtain professional certification to improve teaching quality and enhance students' competitiveness in the job market.

3. Promote evaluations of vocational and technological colleges and universities

Each school is evaluated as an integral unit every 5 years.

4. Promote cooperation with industry

Encourage interaction between academia and industry; design specific courses or curricula to meet the needs of industry personnel.

—(1) Collaboration between industry and academia

Develop vertical education systems, i.e., 3 in 1 (vocational high schools + vocational colleges + enterprises) programs in various combinations of education plans:

3+2 (3 years in vocational high school and 2 years in 2-year junior college);

3+2+2 (3 years in vocational high school, 2 years in 2-year junior college, and 2 years in a 2-year technical college/university completion program);

3+4 (3 years in vocational high school and 4 years in a technical college/university);

5+2 (5 years of junior college plus 2 years in a technical college/university completion program)

—(2) Masters Degree Program for Industry Professionals

—(3) "Final Mile" Program

—(4) Second-Baccalaureate Program

—(5) Interdisciplinary Program

5. Emphasize innovation and research/development

To encourage collaboration between schools and industry, the government offers subsidies to schools that establish regional cooperative work-study centers and promotes various programs, such as the "Industrial Region Work-Study Program", the "Collaboration Efficiency Enhancement Program", and the establishment

of a "Joint Technology Development Center", all with the goal of improving the national economy and contributing to society.

6. Launch international partnerships and exchanges

To cultivate international talent, the government encourages schools to establish an international environment, including internationalized campuses, curricula, and administration systems, and promote global cooperation and exchanges, including international collaboration in research and teaching, teacher and student exchanges and other collaborative programs.

7. Promote flagship schools

Encourage schools and industry to work seamlessly together so that the schools will be able to supply the manpower needed by small and medium enterprises, so as to strengthen the industrial base.





The Ministry of Education Lends Full Support to the Hosting of the 2017 Universiade

Taiwan has shouldered the responsibility for hosting the XXIX 2017 Universiade, which will be the largest scale and highest level international athletic event ever to be held in Taiwan. The Universiade, dubbed the junior Olympics, has always drawn many outstanding athletes to compete, and thus requires the host country to invest much effort in preparation and maintenance. The Ministry of Education will provide full support to the Taipei City Government in making preparations for the 2017 Universiade. We have established a Preparation Task Force for the 2017 Universiade and will work to provide resources and assistance in the areas of for athletic training, facilities, volunteer recruitment, and publicity. We believe that as the Ministry of Education and the Taipei City Government work together, we will be able to stage one of the most successful Universiades in the history of the event.



Chen Chun-Yu, 25, student of Institute of Innovation Technology and Information Management, National Chin-Yi University of Technology

Eco-friendly lighting invention wins international awards

Lighting has undergone constant improvement since its invention in the 19th century, gradually becoming more and more eco-friendly. A solar lighting system invented by Taiwanese student Chen Chun-yu safely introduces natural light indoors while filtering out nearly 100% of the UV rays and 98% of the IR radiation hazardous to human body.

The invention has won Chen two gold medals in international competitions – at the 26th Invention & New Product Exposition of Pittsburgh and at the 39th International Exhibition of Inventions of Geneva.

In accepting the awards, Chen gave credit to his father, who once told him that ‘invention is a way to solve problems, and an inventor must be aware of problems and then solve them’.

With his father’s encouragement, the younger Chen participated in various invention fairs since he was in junior high school. Of all the inventions he has devised, Chen says he always remembered one creation combining an umbrella and light that was inspired by a wild thought.

Practical hands-on experience, as well as frequent discussions with school professors, has helped Chen to gradually build up his capabilities so that he can face challenges with confidence.

“Invention recognizes no national boundaries and nearly every country has its notable inventions,” says Chen based on his observations at international invention fairs. He adds, however, that Taiwan performs well in the inventive field as a whole.

The award-winning inventor also notes that the Ministry of Education is dedicated to the development of a vocational system which benefits students in the system.





Corine Lee, student at the Graduate School of Cultural Heritage Conservation, National Yunlin University of Science and Technology

Packaging design modernizes tea-drinking culture



Student-designer Corine Lee won the iF Packaging Award 2011 in the category of Sales Packaging with a series of tea product packages that utilized recycled paper. In addition to using eco-friendly materials, the shape of tea baskets used by tea growers in earlier Taiwan was also utilized as a prototype for the product line.

With a fondness for the art of tea-drinking, a very profound art in Chinese culture, Lee has worked on several design projects for tea in the past few years. These experiences proved to be rewarding, as Lee won the iF design award for designing the tea brand 'Laozi Say' in 2007.

Currently enrolled in the Graduate School of Cultural Heritage Conservation, National Yunlin University of Science and Technology, Lee at the same time works as the creative director of a design company. She says the best way to begin a new project is to 'discard the old thinking pattern and approach it from a completely new angle'.

To keep up with trends in the ever-changing design industry, Lee absorbs information from various sources. "Sometimes, even strolling around duty-free shops at the airport when changing flights provides a lot of inspiration," she says.

"Of course, the most convenient source for gaining information on trends is still professional books and journals on design published in different countries."

As for the requirements for being a successful designer, Lee says passion for life is a must. Only through deep reflections on the meaning of life can a designer produce products with depth. "Otherwise, everything will seem superficial," says Lee.

SOCIAL EDUCATION



A. Lifelong Learning Promotion: The 331 Initiative

To cultivate the habit of lifelong learning, nurture citizens that thrive on learning, and thus build a lifelong learning society, from 2010 onwards the Ministry of Education has promoted the 3-3-1 initiative. This policy encourages citizens to exercise at least 30 minutes a day, learn for 30 minutes a day, and perform one good deed a day. The active promotion includes:

1. The trial issue of lifelong learning cards
2. The election of lifelong learning role models.
3. Encouraging the practice of a good deed daily.

B. Promotion of Certification for Non-orthodox Learning, Linking Formal and Informal Learning

The Ministry of Education has long encouraged people to engage in lifelong learning and is dedicated to acknowledging accomplishments in personal learning as part of its drive to link formal and informal learning. In November 2006, the Ministry initiated a certification system for courses taken via informal education and achievements obtained through non-orthodox learning, in the process encouraging lifelong learning institutions to establish systematic curricula so as to foster professional skills among the general public.

C. Promotion of Open University Education

Taiwan has two Open Universities, National Open University and the Open University of Kaohsiung. The cumulative number of students has exceeded 400,000, with the average enrollment per semester at 18,000. The universities have produced over 40,000 graduates so far. Open Universities do not require entrance exams and have no set time limits for completion of coursework. Students who fulfill 128 credits will be awarded a bachelor's degree, while 80 credits will earn the student an associate degree.

D. "Learning Hometown – Sustainable Community" Project

To promote lifelong learning, the Ministry of Education has worked to promote "Lifelong Learning Neighborhoods" throughout the country, allowing these neighborhoods to

become lifelong learning environments that provide opportunities for participation and growth, thus fulfilling the vision of lifelong learning that everyone can learn anytime. A team of 14 people made up of representatives from various governmental institutions as well as experts serve as a professional coaching team of counselors. In 2011, the "Learning Hometown – Sustainable Community" Project was launched with 187 neighborhood stations, offering courses such as art and culture, eco-leisure and local industrial improvement.



E. Multi-Functional Lifelong Learning Center Pilot Project

To promote the effective use of supplementary elementary school and junior high school facilities and give community elementary schools and their supplementary school education programs a role to play in the promotion of lifelong learning, 15 elementary schools were chosen in 2011 to be the sites of lifelong learning community centers; from Dec. 2011 to Mar. 2012 these 15 community centers will be evaluated to assist in their growth and sustainability and offer a learning platform for community members.

F. Oversight of Short-Term Cram School

The number of short-term cram schools stood at 18,962 as of Feb. 29, 2012. The Ministry of Education has delegated the oversight of these cram schools to local governments, a job which is included in the local education authorities' scope of evaluation and supervisory work. Public safety lectures and inspections are also carried out annually. A "National Cram-School Information System" database is now being set up to allow the public to look up relevant information.

G. Community Colleges

There were a total of 83 community colleges in 2011, offering the public educational institutions for lifelong learning, raising public awareness of critical social issues and encouraging the public to take part in community education. In the future, local colleges will be encouraged to offer local culture courses and develop areas of specialization. Meanwhile the Ministry of Education will facilitate the certification of informal courses, help to raise quality of instruction, and work to improve community learning institutions and increase the level of community participation, thus revitalizing community learning power and stimulating community growth.

H. Respect the Elders – Grandparents Day

1. National Filial Family Month Events in 2011
2. During the ROC Centennial, special pastries for grandparents were created
3. Centennial Grandparents Day Celebrations



I. Promotion of Elderly Education

With advances in medical science leading to greater longevity for the nation as a whole, the aging of society is an inevitable part of the future. 13 years from now (2025), the elderly are expected to constitute 20.1% of the total population in Taiwan. To improve the adaptability of citizens in both family and social spheres after retirement, to slow the speed of aging of the population, and to protect the rights of the elderly to learn, since 2008 the Ministry of Education has set up “Senior Citizen Active Learning Centers” as well as “Senior Citizens’ Active Lifelong Learning Universities”. These centers utilize the personnel and facilities of existing higher learning institutions and are aimed at citizens aged 55 and older. The project is focused on improving opportunities for the elderly to participate in society and lifelong learning, and offering them an adaptive and friendly learning environment.



J. Promoting Reading and Improving the Quality of Libraries

To improve the quality of service at libraries, the Ministry of Education has secured funding from the Executive Yuan to launch the “Reading Promotion and Space Transformation: Library Service Renewal Development Project 2009-2012” to assist both central and local public libraries in improving the reading environment and upgrading collections and facilities, as well as promoting reading activities. The project also aims to promote the integration of library resources and enhance library hardware and services.

K. Promotion via Social Education Organizations – Bringing Together Education and Leisure

National social education organizations have done much to promote lifelong learning, organizing more than 200 summer and winter camps, 32 events and 40 performances and shows, as well as 30 book readings and scores of other training events during 2011. The first half of 2012 saw over 285 classes and winter camps, 175 lectures and over 3,000 shows and performances.



L. Raising Educational Awareness and Collaborating with Non-Profits

In order to effectively integrate education foundation resources and achieve sustainability in non-profit organizations, the Ministry started promoting educational foundations as part of the lifelong learning project in 1999. In 2009 this effort was transformed into a charitable education project and assisted event, and in 2011 it was further transformed into a lifelong learning education foundation.

M. Art Competitions and Art Education

To promote art education and encourage creativity in art, the Ministry encourages organizations under its supervision to hold various contests in music, art, folk song, puppetry, and literature.

To adapt to changing times and reconsider the usefulness of the existing art education legislation, as well as to anticipate future trends in art education, the Art Education Act is currently being reviewed as of 2012.

In the future, to adjust to the organizational restructuring of the Executive Yuan in 2012, the Ministry of Education will establish a special unit for art and aesthetic education to integrate the art education of all educational stages, enhance administrative connections between all levels of art education, and promote the appreciation of art in all citizens, so as to enhance the sophistication of the people of Taiwan.



SPECIAL EDUCATION

The Special Education Law was amended in 2009 to enhance the development of special education and move toward the goal of taking care of both gifted and disabled students. The emphasis is on both quality and quantity in education, and protecting these students' right to a proper education. A report published in 2011 laid out the rules for implementing adaptive teaching and developing the full potential of these students to enhance the quality of special education.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has announced that all governments should adopt the concept of inclusive education. All students should be permitted to study in public schools except for those who have special individual conditions. Inclusive education means that students should be placed in a least restrictive environment (LRE, i.e., in public schools near the students' homes, so that they may attend classes with peers of the same age, and receive appropriate support from the government). As of 2011, 93.3% of pre-school disabled students in Taiwan are attending regular public schools. The figure is 86.5% for elementary schools, 83.22% for junior high schools and 71.37% for senior high schools.

The budget for special education has increased from NT\$ 5.876 billion in 2002 to NT\$8.8 billion in 2012. The percentage of the total education budget allotted to special education



rose from 3.84% to 4.62%. In 2011, the number of disabled students in secondary and elementary schools was 94,156, while that of gifted students was 38,080. There were 10,659 disabled students in universities.

Key achievements during 2002-2012 include:

1. Completion of legislation for special education; establishment of guidelines for special education policy.
2. Strengthening of multiple-route placement system for students with special needs; promotion of inclusive education.
3. Enhancement of quality and quantity of special education classes.
4. Increase in availability of pre-school special education; emphasis on early intervention for children.
5. Improvements in primary and secondary school special education; providing more flexible alternatives.
6. More opportunities for students to receive tertiary education; making available more special education classroom resources.
7. Encouragement and subsidies for schools that help students with special needs complete full education.
8. Adjustment of teaching methods in special education curricula and training of special education teachers.
9. Establishment of least restrictive environments and support programs on campus.
10. Promotion of multiple education alternatives for gifted students so as to fully develop their talents.
11. Digitization of special education administration and establishment of administrative support networks.
12. Establishment of special education evaluation system so as to increase the efficiency and effectiveness of special education.

In the next decade, we hope to take the following measures to improve special education:

1. Continue amending and putting into practice applicable laws.
2. In line with the integration of kindergartens and nursery schools, to extend special education to children as young as two years of age.
3. Strengthen the promotion of inclusive education in junior high schools and elementary schools.
4. Establish a roadmap for disabled students in the 12-year Basic Education system.
5. Encourage universities to set aside places for disabled students in its entrance screening or hold separate entrance examinations for disabled students.
6. Establishment, in phases, individualized support systems for disabled students in universities.
7. Plan 2012~2017 promotion program for gifted students.
8. Actively improve accessible facilities on campus so as to give disabled students equal rights to education.





EDUCATION EXPENDITURES

The government has demonstrated the importance it attaches to educational development by increasing the education budget. With 12-Year Basic Education to take effect in 2014, President Ma Ying-jeou announced on December 28, 2011 the Compilation and Administration of Education Expenditures Act, which increased the percentage of funds allotted to education expenditures from 21.5% to 22.5% of the national budget, which should add NT\$20 billion to the current education budget, testament to the government's devotion to the promotion of 12-year Basic Education. The new policy took effect on January 1, 2012. In addition, the Ministry also appropriated a large budget to assist minorities and those who live in remote areas.

In the 1951 fiscal year, the education budget for all educational levels was NT\$ 213 million, which accounted for 1.68% of GDP; in the 2011 fiscal year, the figure has since reached NT\$ 802.36

billion, or 5.84% of GDP. The budget for private education institutions has also risen from the 1961 fiscal year, when private institutions accounted for less than 10% of the total education budget, to fiscal year 2011, when funding for private institutions reached 24.16% of the education budget; public schools meanwhile enjoyed 75.84% of the budget.

Looking at the budget breakdown of each education level, in the 2010-11 academic year, the total education budget was NT\$ 652.3 billion, of which preschool education accounted for 3.44%, primary education accounted for 26.52%, junior high school education accounted for 14.61%, senior high school education accounted for 16.05% (high schools 10.60%, vocational schools 5.45%), higher education accounted for 38.70% (college 0.77%, universities 37.93%), and 0.69% went to other institutions.

The Teacher Education Law is designed to develop a pool of qualified teachers for pre-schools, primary schools and secondary schools. Potential candidates are recruited from teacher-training institutions and programs and colleges/universities that offer a teacher-training curriculum.

These teacher training programs recruit qualified students at the undergraduate, masters and doctoral levels. Eligible candidates must complete a curriculum which covers regular courses, specialty courses and pedagogy courses, after which they must attend a 6-month internship, at the end of which if they pass the teacher certification assessment, they will receive official certification. Only candidates who have obtained this certification are eligible to participate in screenings held by local governments for positions in teaching and administration at the secondary, primary and preschool education levels.

TEACHERS' QUALIFICATIONS



Key Policies and Future Plans:

1. The establishment of a Teacher Preparation & Arts Education Unit, which will integrate resources from the educational arms of local and central governments, together with teacher-training colleges/universities and institutions of primary and secondary education, so as to train teachers for all educational levels.

2. The Ministry will finetune the Teacher Education Law, especially in the areas of pre-employment training, on-the-job training, and professional development, as well as take into consideration society's expectations and demand for quality teachers.

3. The implementation of the Teacher Professionalism Index and the Teacher



Professional Performance Index for teachers at all educational levels to encourage teachers to enhance their teaching skills and professional knowledge.

4.

The Ministry will encourage teacher-training colleges/universities to each develop areas of specialization and establish an educational resource exchange platform that will allow different institutions to share resources.

5.

The Ministry will develop a mechanism to evaluate the supply and demand of teachers so as to be able to tweak the number of teachers it trains and ensure superior quality.

6.

The Ministry will provide scholarships and grants to encourage talented students to enter teacher-training programs and also to entice teachers to serve in schools located in remote areas.



7.

The Ministry will set up an evaluation system to be applied to all teacher-training institutions so as to ensure that only qualified faculty possessing up-to-date professional knowledge take part in training teacher candidates.

8.

The Ministry will promote a comprehensive teacher evaluation system as well as build follow-up professional development mechanisms to address deficiencies exposed by evaluation results.

9.

The Ministry will promote curriculum development at the senior high school level and provide professional development opportunities for teachers.

10.

The Ministry will maintain a website for professional development for in-service teachers and encourage teacher-training colleges/universities to offer on-the-job training programs for teachers. These universities will also be funded by the Ministry to organize seminars and provide counseling to local teachers.

11.

In anticipation of an aging society and the implementation of 12-year Basic Education, the Ministry has asked the three major teacher-training colleges/universities to set up an academically-sound professional development platform for in-service teachers.

12.

The central government, local government entities, teacher-training colleges/universities and local schools will form a partnership to train primary school teachers. This four-way partnership is expected to provide vertical integration of teacher supply and professional training.



STUDY IN TAIWAN



The Ministry of Education considers international cooperation and collaboration a cornerstone of its efforts to embrace internationalization, especially for institutions of higher education.

The number of international degree students, language students, and exchange students studying in Taiwan has increased to 44,165 in 2011, a significant increase from 2006, when international student enrolment was only 26,488.

The MOE established the Bureau of International Cultural and Educational Relations (BICER) in 1947 to promote international academic and cultural exchange, along with providing international students wishing to study in Taiwan with assistance, especially with their government scholarship applications and information about Taiwan.

In 2002, the Academia Sinica, Taiwan's foremost research institution, established the Taiwan International Graduate Program (TIGP), a Ph.D. program promoting international cooperation and scholarly exchange, along with cultivating an intellectual environment for promising young scholars.

TIGP students benefit from an entirely English teaching and research environment, while enjoying access to top scholars, teaching faculty and state-of-the-art research facilities at the Academic Sinica and partner universities. Currently, there are 340 international students representing 35 countries enrolled in TIGP, which offers nine programs to choose from.



Meanwhile, the number of programs and courses taught in English in Taiwan is on the increase. For example, National Taiwan University, National Chengchi University, National Tsing Hua University, National Chiao Tung University and National Sun Yat-sen University all offer programs for international students on a variety of subjects ranging from science to the social sciences.

In addition to efforts made to create an internationalized environment for academic study, Taiwan is an ideal study destination for several reasons. According to the Foundation for International Cooperation in Higher Education of Taiwan (FICHET), these reasons include the fact that Taiwan has a highly democratic government within a Mandarin-Chinese environment, its rich



cultural heritage, its advanced technology and its breath-taking travel destinations and sights.

Taiwan can be roughly divided into two geographic sections; the flat, gently rolling hills to the west, where 90% of the population lives, and the rugged, forest-covered mountains to the east. There are eight national parks showcasing the diverse terrain and the flora and fauna of the island.

In addition, Taiwan is rich in the diversity of its biological species, boasting more than 50,000 endemic species, or 2.5% of the world's total, according to a survey released by the Council of Agriculture.

The warm, welcoming personality of the Taiwanese people is widely acknowledged by international students and visitors as this nation's unique international 'trademark'. On the following pages are two stories about international scholarship students currently studying in Taiwan.



Scholarships

The Taiwan Scholarship

In 2011, two government agencies, the Ministry of Education (MOE) and the Ministry of Foreign Affairs (MOFA), jointly initiated the Taiwan Scholarship Program to encourage outstanding international students to undertake degree programs in Taiwan.

The different types of Taiwan Scholarships include:

A. MOFA Scholarship

* Recipients are from countries which have diplomatic relations with the Republic of China (Taiwan), or from countries specified as diplomatically favorable by MOFA. The scholarship includes:

* Round-trip economy-class direct-route international airfare plus a monthly stipend of NT\$30,000.

B. MOE Scholarship

* Recipients must be from countries other than those specified under the MOFA Scholarship.

* Waiver of tuition and certain fees if a recipient studies in an "Association of Taiwan Scholarship Program School". Each recipient will receive a monthly stipend of NT\$15,000 for undergraduate degree studies and NT\$20,000 for postgraduate degree studies.

Huayu Enrichment Scholarship (HES)

The Huayu Enrichment Scholarship (HES) was established by the MOE to encourage international students to learn Mandarin Chinese in Taiwan. While offering language and culture study opportunities for Mandarin Chinese and Taiwanese cultures at universities and colleges with affiliated Mandarin Chinese Language Training Centers, this program also aims to assist scholarship recipients in acquiring Mandarin Chinese language skills and competencies. This, in turn, will increase international students' appreciation of Taiwan. The Huayu Enrichment Scholarship is awarded by Republic of China (Taiwan) Representative Offices or Embassies based on merit. A monthly stipend of NT\$25,000 is offered to recipients for a maximum period of one year.

Friendliness and modern lifestyle makes Taiwan ideal for studying Mandarin



Having just finished her courses in the Mandarin Learning Center at National Taiwan Normal University, Jutta Wörnert is deeply impressed by the faculty's professional attitudes to teaching, the friendly local people, and the safe environment she has found in Taiwan and expresses the hope that she can come back again in the future.

Hailing from Germany, Wörnert has an educational background in banking and speaks fluent French and English. Her post at a European institution qualified her for the EU Officials Mandarin Training Programme in Taiwan offered each year by the Brussels Taiwan Office. Wörnert capitalized on the opportunity and took courses in Chinese spanning six months.

"Traditional Chinese characters are used in Taiwan," Wörnert points out, "and that is the most significant advantage compared with similar courses available elsewhere now."

The hospitality of the Taiwanese people is what Wörnert has cherished most, though, as she reflects on the six months she has spent

Jutta Wörnert, 44, Mandarin Training Center, National Taiwan Normal University

here. "From students on campus to even passers-by, they are all willing to help," she says.

Wörnert also observes that in Taiwan locals place a greater value on tradition than what she has seen in other places. "Religious belief seems to have an intensive correlation to daily life," says Wörnert, noting that she has gone with friends to temples several times.

Other advantages of studying in Taiwan, in Wörnert's opinion, are the safe environment and the modern conveniences available in daily life, as well as the local food and the exposure to calligraphy that one finds here.

Wörnert expresses the hope that she will be able to come back and advance her proficiency in Chinese, for a reason she repeats several times—"I do like Taiwan, because I have had so many wonderful experiences here."

Learning Mandarin while enjoying an independent life in Taiwan



Learning Mandarin while experiencing an independent life abroad was the driving force that took Juliana Gimenez, a 21-year-old Paraguayan, away from her homeland in South America to Taiwan.

After graduating from Colegio Nacional San Vicente Ferrer High School in 2008, Gimenez resolved to learn a third language in addition to her mother tongue Spanish and second language English. Now she is a sophomore in the Department of Business Administration at National Taipei University.

“I decided to study in Taiwan because I wanted to study Chinese and also learn more about Chinese culture,” says Gimenez. She goes on to say that “the advantage of studying here is that after finishing my studies, I will be able to speak one of the most widely spoken languages in the world.” With her edge in languages, Gimenez expects to gain access to more employment opportunities in the future.

Juliana Gimenez, 21, Department of Business Administration, National Taipei University

The business major enjoys the courses she is taking, as her professors assign report projects and give exams periodically, an approach which is very helpful in measuring her progress in classes.

In the meantime, living alone and being independent, learning how to manage money, and living abroad and meeting new friends are also what she considers worthwhile having spent a few years here.

“I like the life here because I have more opportunities to practice Chinese,” says Gimenez, adding that “no matter how hard it can be, you should always fight for your dreams and be willing to stand up again each time you fall.”

VISION

A Quality Educational Environment

The construction of a quality educational environment is the responsibility of the government; it is also our promise to the next generation. The Ministry sees itself as having a duty to provide a quality educational environment in which education is centered around the student and campuses are paragons of security, naturalness, humanity, technology and good health, a place for young minds to grow and learn to be diverse, a place that guarantees success in learning.

Fostering Globally Competitive Talent

Education is the bedrock of a country, particularly in this fast changing world, in the era of the knowledge- and innovation-driven economy. To boost our national strength, the common goal for all educational levels must be to cultivate talent with the ability to cross national borders and succeed in the international market. To achieve this goal, in addition to presenting a diverse curriculum that can address the needs of different students, the education system should also help our young generation develop compassion, creativity, interdisciplinary skills and global views, so that they can collaborate or compete with others in the international arena.



STATISTICS

GENERAL INFORMATION

| | Total Population (million) | | | | Life Expectancy (year) | | GDP (US\$ billion) | GDP per capita (US\$) | Literacy rate among citizens aged 15 and above(%) |
|------|----------------------------|-------|------|------|------------------------|------|--------------------|-----------------------|---|
| | Population Structure (%) | | | Male | Female | | | | |
| | 0-14 | 15-64 | 65- | | | | | | |
| 1980 | 17.9 | 32.1 | 63.6 | 4.3 | 69.6 | 74.6 | 42.2 | 2,385 | 87.7 |
| 1990 | 20.4 | 27.1 | 66.7 | 6.2 | 71.3 | 76.8 | 164.7 | 8,124 | 92.4 |
| 1995 | 21.4 | 23.8 | 68.6 | 7.6 | 71.9 | 77.7 | 274.7 | 12,918 | 94.0 |
| 2000 | 22.3 | 21.1 | 70.3 | 8.6 | 73.8 | 79.6 | 326.2 | 14,704 | 95.6 |
| 2005 | 22.8 | 18.7 | 71.6 | 9.7 | 74.5 | 80.8 | 364.8 | 16,051 | 97.3 |
| 2008 | 23.0 | 17.0 | 72.6 | 10.4 | 75.6 | 81.9 | 400.1 | 17,399 | 97.8 |
| 2009 | 23.1 | 16.3 | 73.0 | 10.6 | 76.0 | 82.3 | 377.5 | 16,359 | 97.9 |
| 2010 | 23.2 | 15.6 | 73.6 | 10.7 | 76.1 | 82.6 | 430.1 | 18,588 | 98.0 |
| 2011 | 23.2 | 15.1 | 74.0 | 10.9 | ... | ... | 466.5 | 20,122 | 98.2 |

SUMMARY OF EDUCATION AT ALL LEVELS SY 2011-2012

Unit: Person

| | No. of Schools (school) | No. of Teachers | No. of Classes (class) | No. of Students | No. of Graduates in 2010 | No. of Students Per 1,000 Population |
|--------------------|-------------------------|-----------------|------------------------|-----------------|--------------------------|--------------------------------------|
| Total | 8,100 | 271,480 | 155,820 | 4,860,034 | 1,213,643 | 209.26 |
| Kindergarten | 3,195 | 14,918 | 9,335 | 189,792 | ... | 8.17 |
| Primary School | 2,659 | 98,528 | 58,008 | 1,457,004 | 271,625 | 62.73 |
| Jr. High School | 742 | 51,188 | 27,645 | 873,220 | 316,904 | 37.60 |
| Sr. High School | 336 | 36,407 | 10,119 | 401,958 | 128,967 | 17.31 |
| Sr. Voca. School | 155 | 16,976 | 8,847 | 366,449 | 109,837 | 15.78 |
| Jr. College | 15 | 1,691 | 2,356 | 101,300 | 20,463 | 4.36 |
| Uni. & College | 150 | 48,662 | 32,251 | 1,250,925 | 292,758 | 53.86 |
| Special Edu. Sch. | 27 | 1,829 | 640 | 7,014 | 2,038 | 0.30 |
| Supp. & Cont. Sch. | 819 | 1,204 | 6,286 | 197,384 | 67,694 | 8.50 |
| Open University | 2 | 77 | 333 | 14,988 | 3,357 | 0.65 |

GROSS ENROLLMENT RATE AND NET ENROLLMENT RATIO BY LEVEL OF EDUCATION

Unit:%

| School Year | Total | | 1st Level (Primary) | | 2nd Level | | | | 3rd Level (Tertiary) | |
|-------------|-------|-------|---------------------|-------|-----------|-------|--------|-------|----------------------|-------|
| | Gross | Net | Gross | Net | Junior | | Senior | | Gross | Net |
| | | | | | Gross | Net | Gross | Net | | |
| 1976-77 | 69.61 | 67.57 | 100.65 | 97.54 | 90.21 | 77.33 | 56.54 | 43.17 | 15.40 | 9.97 |
| 1981-82 | 71.95 | 69.52 | 101.11 | 97.59 | 97.71 | 84.41 | 68.03 | 52.58 | 16.71 | 11.47 |
| 1991-92 | 82.41 | 78.74 | 100.99 | 98.70 | 100.23 | 91.70 | 90.28 | 72.93 | 32.37 | 20.98 |
| 2001-02 | 89.07 | 82.29 | 99.66 | 98.19 | 99.25 | 93.53 | 99.66 | 88.21 | 62.96 | 42.51 |
| 2005-06 | 94.73 | 87.71 | 100.34 | 98.46 | 99.85 | 96.51 | 96.01 | 88.53 | 82.02 | 57.42 |
| 2006-07 | 95.33 | 88.55 | 99.54 | 97.77 | 99.48 | 96.65 | 98.79 | 91.31 | 83.58 | 59.83 |
| 2007-08 | 96.05 | 89.26 | 100.82 | 97.79 | 99.13 | 96.86 | 98.23 | 90.72 | 85.31 | 61.41 |
| 2008-09 | 95.52 | 89.70 | 100.70 | 97.74 | 99.36 | 96.83 | 99.11 | 91.65 | 83.18 | 63.76 |
| 2009-10 | 95.25 | 89.93 | 101.40 | 98.01 | 98.84 | 97.47 | 99.12 | 92.35 | 82.17 | 64.98 |
| 2010-11 | 95.60 | 90.45 | 99.68 | 97.97 | 101.80 | 97.45 | 98.89 | 92.73 | 83.77 | 67.27 |
| 2011-12 | 95.45 | 90.56 | 100.37 | 97.87 | 101.02 | 97.52 | 99.11 | 93.24 | 83.37 | 68.27 |

NUMBER OF STUDENTS PER TEACHER AT ALL LEVELS

Unit: Person

| School Year | Total | Kindergarten | Primary School | Jr. High School | Sr. High School | Sr. Voca. School | University | College | Junior College | Special Edu. Sch. |
|-------------|-------|--------------|----------------|-----------------|-----------------|------------------|------------|---------|----------------|-------------------|
| 1976-77 | 29.90 | 32.66 | 36.04 | 25.94 | 23.16 | 22.70 | 11.42 | 16.22 | 20.00 | 6.65 |
| 1981-82 | 27.25 | 26.10 | 31.79 | 22.97 | 22.99 | 22.50 | 13.53 | 11.92 | 20.79 | 5.24 |
| 1991-92 | 24.22 | 15.83 | 27.20 | 21.23 | 22.29 | 21.28 | 14.82 | 11.38 | 19.35 | 3.72 |
| 2001-02 | 19.71 | 12.44 | 18.60 | 15.67 | 19.41 | 19.18 | 19.60 | 20.17 | 20.56 | 3.58 |
| 2005-06 | 19.29 | 10.27 | 18.02 | 16.02 | 19.46 | 18.81 | 20.11 | 18.98 | 18.92 | 3.72 |
| 2006-07 | 19.30 | 10.60 | 17.86 | 15.70 | 19.29 | 18.41 | 19.93 | 18.63 | 21.01 | 3.79 |
| 2007-08 | 19.03 | 11.02 | 17.31 | 15.23 | 19.11 | 18.70 | 20.25 | 18.55 | 22.73 | 3.84 |
| 2008-09 | 18.76 | 10.69 | 16.74 | 15.08 | 18.91 | 19.01 | 20.47 | 18.81 | 23.65 | 3.96 |
| 2009-10 | 18.49 | 10.77 | 16.07 | 14.90 | 18.73 | 19.08 | 21.03 | 19.35 | 26.13 | 4.11 |
| 2010-11 | 18.18 | 12.57 | 15.26 | 14.31 | 18.58 | 18.69 | 21.25 | 19.81 | 26.74 | 3.91 |
| 2011-12 | 17.90 | 12.72 | 14.79 | 13.74 | 18.53 | 18.29 | 21.52 | 21.10 | 27.69 | 3.83 |

OVERSEAS STUDENTS IN R.O.C.

Unit: Person

| Year / School Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|--|--------|--------|--------|--------|--------|--------|
| Total | 26,488 | 30,150 | 33,065 | 39,042 | 44,776 | 55,463 |
| Subtotal of International Students | 24,511 | 27,738 | 30,067 | 34,285 | 37,177 | 40,843 |
| Studying for a Degree | 3,935 | 5,259 | 6,258 | 7,764 | 8,801 | 10,059 |
| Overseas Compatriot Students | 10,320 | 10,861 | 11,426 | 12,840 | 13,562 | 14,045 |
| International Exchange | 1,121 | 1,441 | 1,732 | 2,069 | 2,259 | 2,259 |
| Studying Mandarin Chinese | 9,135 | 10,177 | 10,651 | 11,612 | 12,555 | 14,480 |
| Subtotal of Overseas Chinese Students | 1,977 | 2,412 | 2,998 | 4,757 | 7,599 | 14,620 |
| Mainland China Students (Studying for a degree) | - | - | - | - | - | 928 |
| Mainland China Students (to take short-term courses or attend meeting) | 448 | 823 | 1,321 | 2,888 | 5,316 | 11,227 |
| Short-term Courses | 1,245 | 1,146 | 1,258 | 1,307 | 1,604 | 1,604 |
| Overseas Compatriot Youth Technical Training Classes | 284 | 443 | 419 | 562 | 679 | 861 |

RATIO OF EDUCATIONAL EXPENDITURE TO GDP

| Fiscal Year | Educational Expenditure (US\$million) | | | GDP(US\$ million) | % to GDP | | |
|-------------|---------------------------------------|---------------|----------------|-------------------|----------|--------|---------|
| | Total | Public Sector | Private Sector | | Average | Public | Private |
| 1970-71 | 281 | 227 | 54 | 6,213 | 4.52 | 3.65 | 0.87 |
| 1980-81 | 2,055 | 1,671 | 384 | 46,430 | 4.43 | 3.60 | 0.83 |
| 1990-91 | 11,052 | 9,088 | 1,964 | 171,668 | 6.43 | 5.29 | 1.14 |
| 2001 | 17,464 | 12,997 | 4,467 | 293,712 | 5.95 | 4.42 | 1.52 |
| 2005 | 21,251 | 15,643 | 5,608 | 364,832 | 5.82 | 4.29 | 1.54 |
| 2006 | 21,586 | 15,887 | 5,699 | 376,375 | 5.74 | 4.22 | 1.51 |
| 2007 | 21,644 | 16,052 | 5,592 | 393,134 | 5.51 | 4.08 | 1.42 |
| 2008 | 23,169 | 16,941 | 6,228 | 400,132 | 5.79 | 4.23 | 1.56 |
| 2009 | 23,921 | 17,986 | 5,934 | 377,529 | 6.34 | 4.76 | 1.57 |
| 2010 | 24,587 | 18,449 | 6,138 | 430,149 | 5.72 | 4.29 | 1.43 |
| 2011 | 27,226 | 20,648 | 6,579 | 466,483 | 5.84 | 4.43 | 1.41 |

READING, MATH AND SCIENCE SCORES OF 15-YEAR-OLDS ON THE PISA 2009

| Rank | Reading | | | Rank | Mathematics | | | Rank | Science | | |
|------|-----------------|------|-----|------|-----------------|------|-----|------|-----------------|------|-----|
| | Country | Avg. | SE | | Country | Avg. | SE | | Country | Avg. | SE |
| 1 | Shanghai-China | 556 | 80 | 1 | Shanghai-China | 600 | 103 | 1 | Shanghai-China | 575 | 82 |
| 2 | Korea | 539 | 79 | 2 | Singapore | 562 | 104 | 2 | Finland | 554 | 89 |
| 3 | Finland | 536 | 86 | 3 | Hong Kong-China | 555 | 95 | 3 | Hong Kong-China | 549 | 87 |
| 4 | Hong Kong-China | 533 | 84 | 4 | Korea | 546 | 89 | 4 | Singapore | 542 | 104 |
| 5 | Singapore | 526 | 97 | 5 | Taiwan | 543 | 105 | 5 | Japan | 539 | 100 |
| 6 | Canada | 524 | 90 | 6 | Finland | 541 | 82 | 6 | Korea | 538 | 82 |
| 7 | New Zealand | 521 | 103 | 7 | Liechtenstein | 536 | 88 | 7 | New Zealand | 532 | 87 |
| 8 | Japan | 520 | 100 | 8 | Switzerland | 534 | 99 | 8 | Canada | 529 | 90 |
| 9 | Australia | 515 | 99 | 9 | Japan | 529 | 94 | 9 | Estonia | 528 | 84 |
| 23 | Taiwan | 495 | 86 | 10 | Canada | 527 | 88 | 12 | Taiwan | 520 | 87 |

SE: standard error

TRENDS IN INTERNATIONAL MATHEMATICS AND SCIENCE STUDY 2007

| Rank | Eighth Grade Science | | | Eighth Grade Mathematics | | | Fourth Grade Science | | | Fourth Grade Mathematics | | |
|------|----------------------|------|-----|--------------------------|------|-----|----------------------|------|-----|--------------------------|------|-----|
| | Country | Avg. | SE | Country | Avg. | SE | Country | Avg. | SE | Country | Avg. | SE |
| 1 | Singapore | 567 | 4.4 | Taiwan | 598 | 4.5 | Singapore | 587 | 4.1 | Hong Kong-China | 607 | 3.6 |
| 2 | Taiwan | 561 | 3.7 | Korea | 597 | 2.7 | Taiwan | 557 | 2.0 | Singapore | 599 | 3.7 |
| 3 | Japan | 554 | 1.9 | Singapore | 593 | 3.8 | Hong Kong-China | 554 | 3.5 | Taiwan | 576 | 1.7 |
| 4 | Korea | 553 | 2.0 | Hong Kong-China | 572 | 5.8 | Japan | 548 | 2.1 | Japan | 568 | 2.1 |
| 5 | England | 542 | 4.5 | Japan | 570 | 2.4 | Russia | 546 | 4.8 | Kazakhstan | 549 | 7.1 |
| 6 | Hungary | 539 | 2.9 | Hungary | 517 | 3.5 | Latvia | 542 | 2.3 | Russia | 544 | 4.9 |
| 7 | Czech | 539 | 1.9 | England | 513 | 4.8 | England | 542 | 2.9 | England | 541 | 2.9 |
| 8 | Slovenia | 538 | 2.2 | Russia | 512 | 4.1 | United States | 539 | 2.7 | Latvia | 537 | 2.3 |
| 9 | Hong Kong-China | 530 | 4.9 | United States | 508 | 2.8 | Hungary | 536 | 3.3 | Netherlands | 535 | 2.1 |
| 10 | Russia | 530 | 3.9 | Lithuania | 506 | 2.3 | Italy | 535 | 3.2 | Lithuania | 530 | 2.4 |

SE: standard error

MEDALS ATTAINED BY OUR STUDENTS IN THE ASIAN PACIFIC/INTERNATIONAL OLYMPIAD

| Year | 2008 | 2009 | 2010 | 2011 | 2012 | |
|---------------------------------------|---|--|--|---|--|--|
| Total | 26G 13S 8B 4H | 28G 16S 4B 3H | 26G 14S 9B 10H | 27G 15S 6B 3H | ... | |
| Asian Pacific Mathematics Olympiad | 1G 2S 4B 3H | 1G 2S 4B 3H | 1G 2S 4B 3H | 1G 2S 4B 3H | ... | |
| Asia Physics Olympiad | Host Country No. of Participants Medals Rank | Mongolia 15 Countries 7G 1S 2 nd | Thailand 15 Countries 7G 1S 2 nd | Taiwan 16 Countries 5G 1S 4B 6H A team 1 st B team 4 th | Israel 16 Countries 3G 4S 1B 2 nd | India 21 Countries 6G 1S 1B 2 nd |
| International Mathematics Olympiad | Host Country No. of Participants Medals Rank | Spain 101 Countries 2G 4S 9 th | Germany 104 Countries 1G 5S 11 th | Kazakhstan 96 Countries 1G 3S 1B 1H 19 th | Netherlands 101 Countries 2G 4S 8 th | Argentina 100 Countries 1G 3S 2H 14 th |
| International Chemistry Olympiad | Host Country No. of Participants Medals Rank | Hungary 69 Countries 2G 1S 1B 5 th | England 67 Countries 4G 1 st | Japan 68 Countries 2G 2S 4 th | Turkey 70 Countries 3S 1B 8 th | U.S.A. 72 Countries 3G 1S 2 nd |
| International Physics Olympiad | Host Country No. of Participants Medals Rank | Vietnam 82 Countries 5G 2 nd | Mexico 68 Countries 3G 2S 4 th | Croatia 82 Countries 5G 3 rd | Thailand 84 Countries 5G 1 st | Estonia 82 Countries 5G 2 nd |
| International Informatics Olympiad | Host Country No. of Participants Medals Rank | Egypt 77 Countries 2G 1S 1B Nil | Bulgaria 83 Countries 2G 2S Nil | Canada 84 Countries 1G 3S Nil | Thailand 80 Countries 3G 1S Nil | ... |
| International Biology Olympiad | Host Country No. of Participants Medals Rank | India 55 Countries 4G 4 th | Japan 56 Countries 2G 2S 4 th | Korea 60 Countries 4G 3 rd | Taiwan 58 Countries 4G 2 nd | Singapore 59 Countries 3G 1S 3 rd |
| International Earth Science Olympiad | Host Country No. of Participants Medals Rank | Philippines 6 Countries 2G 2S 1 st | Taiwan 14 Countries 4G 1 st | Indonesia 19 Countries 3G 1S 1 st | Italy 26 Countries 3G 1S 1 st | ... |
| International Junior Science Olympiad | Host Country No. of Participants Medals Rank | Korea 44 Countries 6G 2 nd | Azerbaijan 45 Countries 4G 2S 2 nd | Nigeria 33 Countries 4G 2S 1 st | South Africa 40 Countries 6G 1 st | ... |

G= Gold, S=Silver, B=Bronze, and H= Honorary award

ANNUAL PAPERS AND RANK BY NATIONALITY IN SCI

| Country | 2007 | | 2008 | | 2009 | | 2010 | | 2011 | |
|---------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|------|
| | No. of these | Rank |
| U.S.A. | 300,213 | 1 | 335,720 | 1 | 331,790 | 1 | 330,339 | 1 | 391,225 | 1 |
| China | 90,206 | 2 | 113,102 | 2 | 127,176 | 2 | 134,697 | 2 | 160,466 | 2 |
| England | 81,125 | 3 | 89,685 | 3 | 89,472 | 3 | 90,004 | 3 | 107,384 | 3 |
| Germany | 75,870 | 4 | 86,486 | 4 | 88,056 | 4 | 86,978 | 4 | 104,383 | 4 |
| Japan | 73,793 | 5 | 79,594 | 5 | 78,564 | 5 | 72,607 | 5 | 82,966 | 5 |
| France | 53,581 | 6 | 63,627 | 6 | 63,970 | 6 | 62,324 | 6 | 72,145 | 6 |
| Italy | 43,705 | 8 | 50,056 | 8 | 50,798 | 8 | 50,691 | 8 | 62,053 | 7 |
| Canada | 46,372 | 7 | 52,776 | 7 | 54,156 | 7 | 53,519 | 7 | 60,141 | 8 |
| Spain | 34,000 | 9 | 41,658 | 9 | 43,346 | 9 | 43,693 | 9 | 52,337 | 9 |
| India | 29,804 | 10 | 38,778 | 10 | 40,135 | 10 | 40,711 | 10 | 47,207 | 10 |
| Taiwan | 18,746 | 16 | 22,636 | 16 | 24,315 | 16 | 23,715 | 16 | 26,601 | 17 |

ANNUAL PAPERS AND RANK BY NATIONALITY IN EI

| Country | 2007 | | 2008 | | 2009 | | 2010 | | 2011 | |
|---------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|------|
| | No. of these | Rank |
| China | 106,164 | 1 | 137,153 | 1 | 174,307 | 1 | 206,099 | 1 | 231,608 | 1 |
| U.S.A. | 76,945 | 2 | 101,130 | 2 | 99,235 | 2 | 123,774 | 2 | 112,109 | 2 |
| Japan | 39,422 | 3 | 37,154 | 3 | 41,297 | 3 | 44,097 | 3 | 38,672 | 3 |
| Germany | 25,112 | 4 | 26,327 | 4 | 29,273 | 4 | 32,515 | 4 | 32,037 | 4 |
| India | 15,347 | 11 | 17,891 | 9 | 20,820 | 8 | 25,040 | 6 | 27,034 | 5 |
| England | 23,172 | 5 | 23,738 | 5 | 24,172 | 5 | 26,709 | 5 | 24,707 | 6 |
| France | 19,756 | 7 | 21,484 | 6 | 22,383 | 6 | 24,366 | 7 | 23,552 | 7 |
| S.Korea | 20,247 | 6 | 20,515 | 7 | 21,850 | 7 | 24,339 | 8 | 23,320 | 8 |
| Taiwan | 16,657 | 9 | 17,483 | 10 | 18,869 | 9 | 20,302 | 9 | 20,016 | 9 |
| Canada | 17,864 | 8 | 17,940 | 8 | 18,826 | 10 | 20,129 | 10 | 18,617 | 10 |

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WEBSITE: <http://www.edu.tw>

For more information, please call:

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