

# Education in Asia

The information on education and school system is the base for our discussion on career development of women in S&T. Please find the following examples in Asia for your reference.

We appreciate your contribution;

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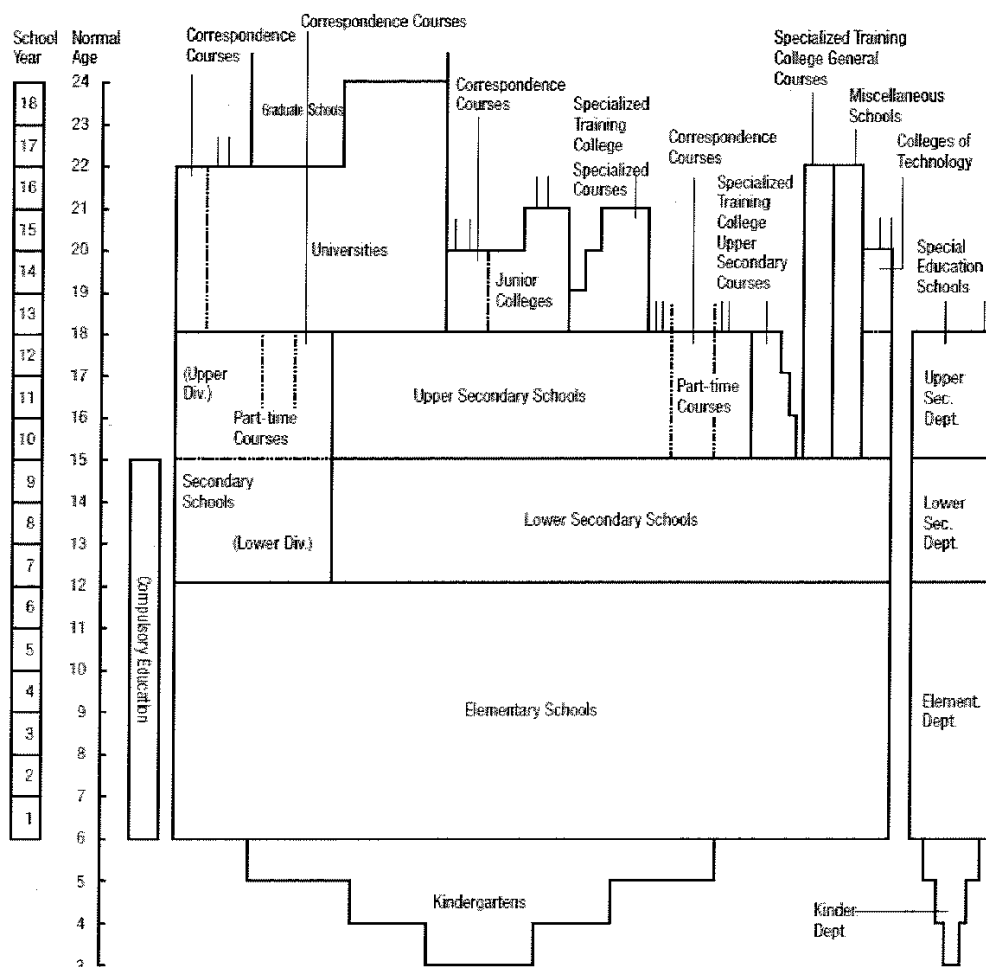
# Education in Japan

Source: MEXT (Ministry of Education, Culture, Sports, Science and Technology, Japan)

<http://www.mext.go.jp/english/statist/05101901.htm>

## 1. Organization of the School System in Japan

Organization of the School System in Japan



## **2. Brief notes of the educational institutions in Japan**

Brief notes on each of the different types of educational institutions shown in the diagram are given below.

### **(1) Kindergartens (Yôchien)**

Kindergartens aim at helping pre-school children develop their mind and body by providing a sound educative environment for them. Kindergartens cater for children aged 3, 4 and 5, and provide them with one- to three-year courses.

### **(2) Elementary Schools (Shôgakkô)**

All the children who have attained the age of 6 are required to attend elementary school for six years. Elementary schools aim at giving children between the ages of 6 and 12 primary general education suited to the stage of their mental and physical development.

### **(3) Lower Secondary Schools (Chûgakkô)**

All the children who have completed elementary school are required to study in lower secondary school for three years until the end of the school year in which they reach the age of 15. Lower secondary schools give children between the ages of 12 and 15 general secondary education suited to the stage of their mental and physical development, on the basis of the education given in elementary school.

### **(4) Upper Secondary Schools (Kôtô-gakkô)**

Those who have completed nine-year compulsory education in elementary and lower secondary school may go on to upper secondary school. Students must normally take entrance examinations to enter upper secondary school. In addition to full-day courses, there are also part-time and correspondence courses. Full-day courses last three years, while both part-time and correspondence courses last three years or more. The last two courses are mainly intended for young workers who wish to pursue their upper secondary studies in a flexible manner in accordance with their own needs. All these courses lead to a certificate of the upper secondary education.

In terms of the content of teaching provided, the upper secondary school courses may also be classified into three categories: general, specialized and integrated courses. General courses provide mainly general education suited to the needs of both those who wish to enter institutions of higher education and those who are going to enter employment but have chosen no specific vocational area. Specialized courses are mainly intended to provide vocational or other specialized education for those students who have chosen a particular vocational area as their future career. These courses may be further classified into: agriculture, industry, commerce, fishery, home economics, nursing, science-mathematics, physical education, music, art, English language and other courses. Integrated courses were introduced in 1994. These courses offer a wide variety of subject areas and subjects from both the general and the specialized courses, in order to adequately satisfy students' diverse interests, abilities and aptitudes, future career plans, etc.

#### **(5) Secondary Schools (Chûitô-kyôiku-gakkô)**

In April 1999, a new type of six-year secondary education school, called "Secondary School" was introduced into our school system. Secondary schools combine lower and upper secondary school education in order to provide lower secondary education and upper secondary general and specialized education through 6 years. The lower division in the first three years provides lower secondary school education and the upper division in the latter three years gives upper secondary school education.

#### **(6) Special Education Schools (Tokushu-kyôiku-gakkô)**

Special education schools aim at giving children with disabilities education suited to their individual needs. There are schools for the blind, deaf and other disabled. Schools for the other disabled may be further classified into three types: those for the mentally retarded, those for the physically disabled and those for the health impaired. Special education schools comprise four levels of departments, namely, kindergarten, elementary, lower secondary and upper secondary departments. Special classes in ordinary elementary, lower and upper secondary schools cater to disabled children whose disabilities are not so serious.

#### **(7) Institutions of Higher Education**

Institutions of higher education in Japan include universities, junior colleges and colleges of technology. In addition, specialized training colleges offering specialized courses (see 8 below) may be regarded as one type of higher education institution.

**a. Universities (Daigaku)** are intended to conduct teaching and research in depth in specialized academic disciplines and provide students with advanced knowledge. Universities require for admission the completion of upper secondary schooling or its equivalent, and offer courses of at least four years leading to a bachelor's degree (Gakushi). Universities may set up a graduate school offering advanced studies in a variety of fields leading to master's (Shushi) and doctor's (Hakushi) degrees. Graduate schools normally last five years, consisting of the first two-year courses leading to a master's degree and the following three year courses leading to a doctor's degree. However, there is a possibility for those who are especially successful in their studies to get a master's degree in one year, and a doctor's degree in two years.

**b. Junior Colleges (Tanki-daigaku)** aim at conducting teaching and research in specialized subjects and at developing in students such abilities as are required for vocational or practical life. Junior colleges require for admission the completion of upper secondary schooling or its equivalent, and offer two- or three-year programs in different fields of study, which lead to the title of associate (Jun-gakushi). Most courses offered in these colleges are in such fields as humanities, social sciences, teacher training and home economics. The great majority of the students in these colleges are women. Those who have completed junior college may go on to university and their credits acquired at junior college may be counted as part of the credits leading to a bachelor's degree. Junior colleges are also allowed to offer advanced courses which may lead to a bachelor's degree.

c. **Colleges of Technology (Kôtô-senmon-gakkô)**, unlike universities or junior colleges, accept those who have completed lower secondary schooling, and offer five-year (five and a half years at colleges of maritime technology) consistent programs. They were established in 1962, intended to conduct teaching in specialized subjects in depth and to develop in students such abilities as are required for vocational life. Students who have completed colleges of technology are granted the title of associate (Jun-gakushi) and may apply for admission to the upper division of university. Colleges of technology are also allowed to offer a two-years advanced courses, which follow the five-year program in order to provide a higher level of technical education.

**(8) Specialized Training Colleges (Senshû-gakkô) and Miscellaneous Schools (Kakushu-gakkô)**

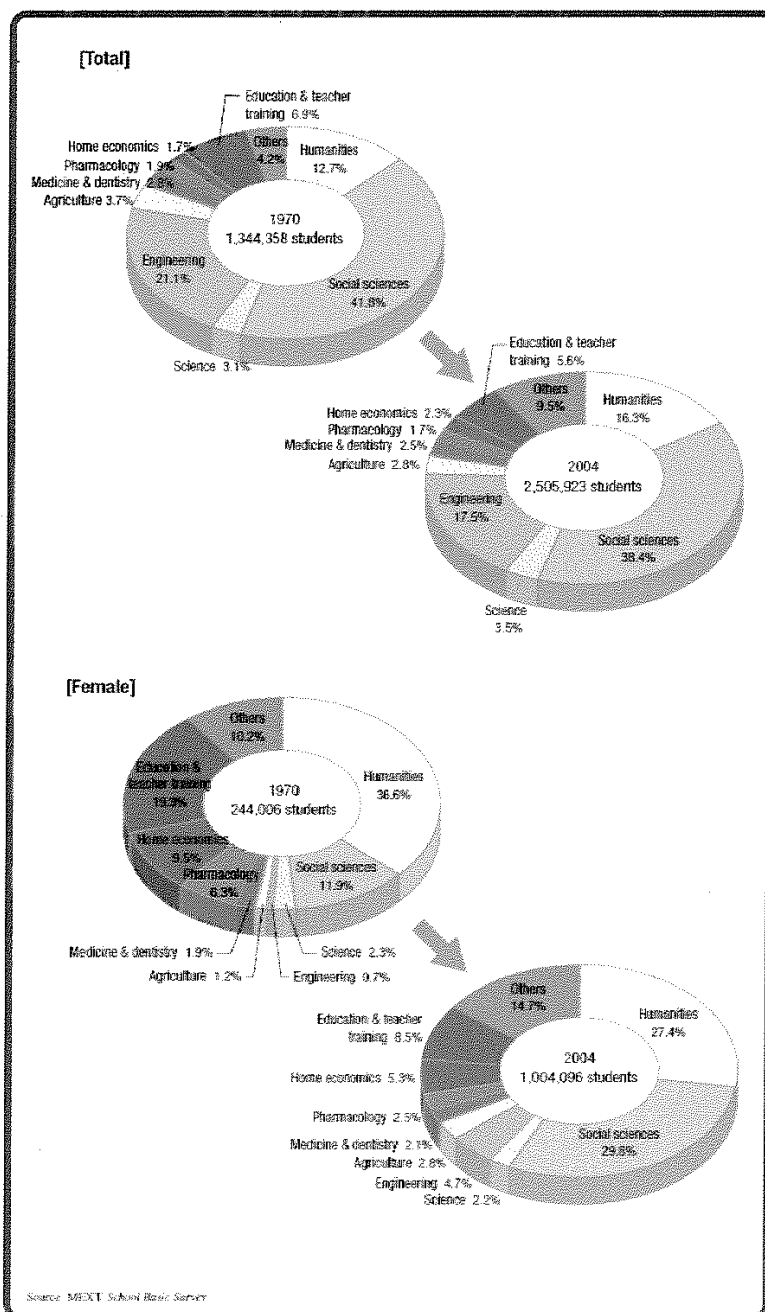
In addition to the above mentioned institutions of primary, secondary and higher education, there are educational institutions known as “specialized training colleges” and “miscellaneous schools” which offer a variety of practical vocational and technical education programs in response to diverse demands of people in a changing society. The great majority of these schools are privately controlled.

a. Courses provided in **Specialized Training Colleges** may be classified into three categories: upper secondary, specialized and general courses. Each course gives at least 40 students systematic instruction, lasting not less than one year, for 800 class hours or more per year. Specialized training colleges offering upper secondary courses are called “upper secondary specialized training schools (Kotosenshu-gakko)” and those offering specialized courses are called “professional training colleges (Senmon-gakko).” The former require for admission the completion of compulsory education, while the latter accept those who have graduated from the upper secondary schools or upper secondary courses of specialized training colleges and award the title, “technical associate (Senmonshi),” to those who complete specialized courses that fulfill certain criteria, including a study period of at least two years. Students who have completed an upper secondary course lasting three years or more of specialized training colleges designated by the Minister are entitled to apply for a university place.

b. **Miscellaneous Schools** provide people with vocational and practical training such as dressmaking, cooking, book-keeping, typing, automobile driving and repairing, computer techniques, etc. Most courses in miscellaneous schools require for admission the completion of lower secondary schooling. These courses normally last one year or more with at least 680 class hours per year, but there are also shorter courses of three months or more.

### 3. Trends in S&T in Universities in Japan

**I-2-4 Percentage Distribution of University Students by Major Field of Study**



The percentage distribution of university students by major field of study shows that in 2004, the highest proportion took Social Sciences (38.4%), followed by Engineering (17.5%) and Humanities (16.3%). There has been no substantial change in the ratio of the top fields of study since 1970. Looking at female students, the proportion majoring in Social Sciences increased significantly.

See p.68 of reference documents

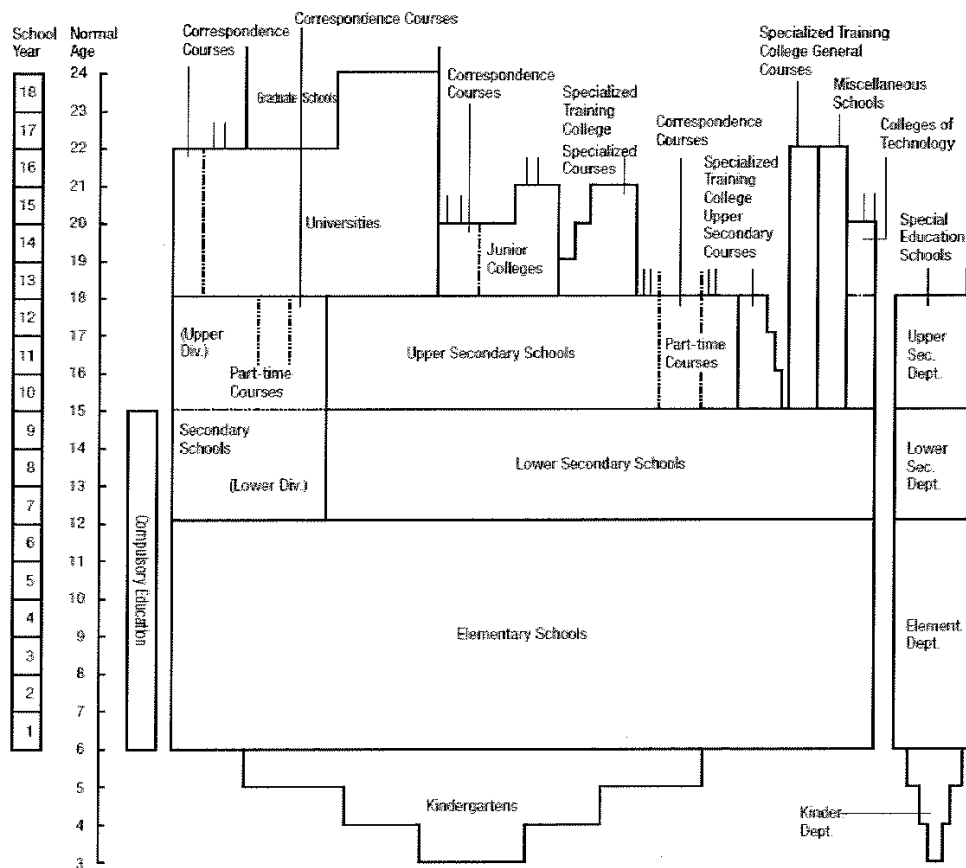
# Education in Korea

Source: MOE & HRD (Ministry of Education & and Human Resources Development, Korea)

<http://english.moe.go.kr/html/education/?menu=01>

## 1. Organization of the School System in Korea

Organization of the School System in Japan



## 2. Brief notes of the educational institutions in Korea

Brief notes on each of the different types of educational institutions shown in the diagram are given below.

### (1) Kindergartens (유치원, 幼稚園, **you-chi-won**)

Kindergartens aim at helping pre-school children develop their mind and body by providing a sound educative environment for them. Kindergartens cater for children aged 4-6, and provide them with one- to three-year courses.

### (2) Primary Schools (초등학교, 初等學校, **cho-deung-hak-gyo**)

All the children who have attained the age of 7 are required to attend an elementary school for six years. Elementary schools aim at giving children between the ages of 7 and 12 primary general education(K1-K6) suited to the stage of their mental and physical development.

### (3) Middle Schools (중학교, 中學校, **joong-hak-gyo**)

All the children who have completed an elementary school are required to study at a middle schools for three years until the end of the school year in which they reach the age of 15. Middle secondary schools give children between the ages of 13 and 15 general secondary education(K7-K9) suited to the stage of their mental and physical development, on the basis of the education given in elementary school. Since 2004, middle school education became free, compulsory nationwide.

### (4) High Schools (고등학교, 高等學校, **ko-deung-hak-gyo**)

High school education is mainly aimed at providing secondary and basic advanced education based on middle school education. High schools are divided into general high schools, vocational high schools, and others (foreign language, art, and science high schools).

Graduates of middle schools or the equivalent may enter high schools. The period of study is three years and students bear the expenses of education.

Students have to take the national examination which is a kind of scholastic aptitude test for high school education. Students who get higher score than a certain level are assigned to one of general high schools near from their residence. Applicants for vocational high schools and other schools(specialized in foreign language, art, and science) can choose their school and the admission is based on their score of the examination.

General high schools provide regular high school education. Students choose their major areas in their 11th grade. Depending on their aptitude and interests, humanities/social studies, sciences, or vocational training are offered as options. Most, however, choose to enter fields that would allow them to enter college.

Vocational high schools offer general secondary education and specialized courses including those in the fields of agriculture, industry, commerce, fisheries/maritime, and home economics.

Foreign language high schools, science high schools, and art high schools were established to train promising students in the respective fields. With active government



assistance, such schools are able to identify gifted students at an early period to maximize the students' potentials

**(5) Special Schools (특수학교, 特殊學校, teuk-soo-hak-gyo) 확인 필요**

Special schools provide disabled students with education at the level of kindergarten, primary school, middle school, and high school. There are 141 special schools with a total enrollment of 23,762 severely disabled children. In the case of lesser impediments, 28,002 children are provided education in 4,366 classes for special needs students at regular schools.

**(6) Institutions of Higher Education (Tertiary Education)**

Institutions of higher education in Korea are divided into seven categories: colleges and universities(163), industrial universities(19), universities of education(11), junior colleges(159), broadcast and correspondence universities(1), technical colleges(1), and other miscellaneous institutions.

**a. Universities (대학교, 大學校, dae-hak-gyo)** are intended to teach and do research conduct teaching and research in depth in specialized academic disciplines and provide students with advanced knowledge. Universities require for admission the completion of upper secondary schooling or its equivalent and the Korean SAT score. They offer courses of at least four years leading to a bachelor's degree (학사, 學士, hak-sa). Universities may set up a graduate school offering advanced studies in a variety of fields leading to master's (석사, 碩士, seok-sa) and doctor's (박사, 博士, bak-sa) degrees.

**b. Industrial Universities(산업대학교, 産業大學校, san-up-dae-hak-gyo)** provide four-year education specialized on science and engineering. They offer not only daytime courses but also evening courses for students who have jobs leading to bachelor's degrees. Curriculum of industrial universities put emphasis on practical training and cooperation with industry.

**c. Universities of Education (교육대학, 教育大學, gyo-yuk-dae-hak-gyo)** provide specialized education programs for those who want to be primary school teachers. Just like other universities, they require for admission the completion of upper secondary schooling or its equivalent and the Korean SAT score. Graduates from universities of education are given teacher's certificates as well as BA degrees and are guaranteed to get jobs by the government. While the education to train teachers for secondary education is offered by the colleges of education of universities, whose graduates have to pass the national qualification examination for secondary education.

**d. Junior Colleges (전문대학, 專門大學, jun-moon-dae-hak)** provide two or three year post-secondary programs aimed to produce mid-level technicians. Junior colleges require for admission the completion of upper secondary schooling or its equivalent and the Korean SAT score. Those who have completed junior college may go on to university and their credits acquired at junior college may be counted as part of the credits leading to a bachelor's degree. Only nine majors including nursing, mechanics, and fishery were allowed to offer three year programs.

### The Number of Schools, Students and Teachers in Korea (2003)

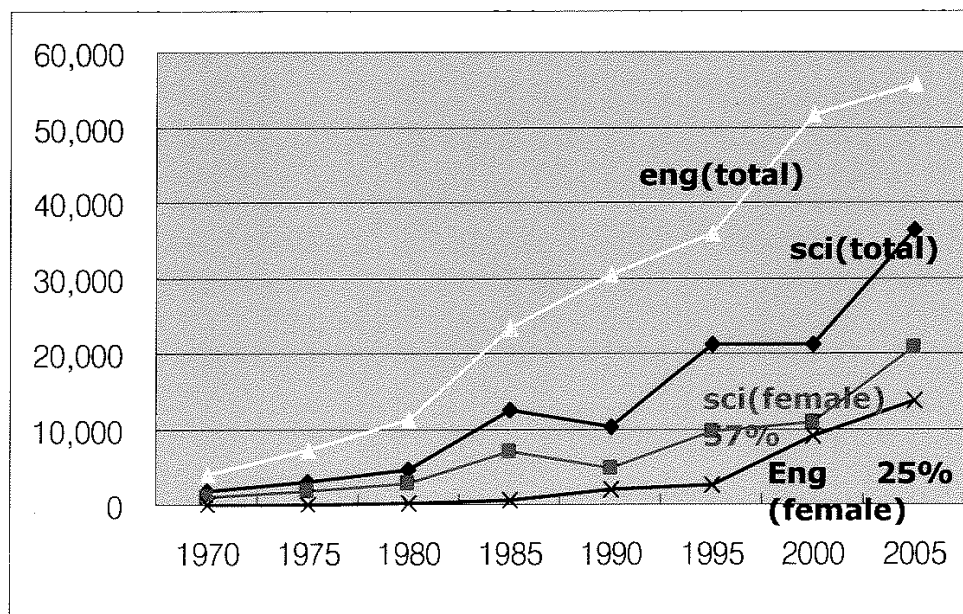
Classification		Schools			Students	Teachers
		Total	National	Public	Private	
	Total	19,258	103	13,009	6,146	11,951,298
	Kindergartens	8,292	3	4,281	4,008	546,531
	Subtotal	5,464	17	5,370	77	4,175,731
Primary Education	Primary Schools	5,463	17	5,370	76	4,175,626
	Civic Schools	1	—	—	1	105
	Subtotal	2,865	10	2,174	681	1,859,265
Middle School Education	Middle Schools	2,850	9	2,172	669	1,854,641
	Civic High Schools	4	—	1	3	150
	Miscellaneous Schools	11	1	1	9	4,474
	Subtotal	2,095	17	1,128	950	1,787,541
High School Education	High Schools	1,297	12	657	628	1,224,452
	Vocational High Schools	734	5	424	305	542,077
	Air & Correspondence High Schools	39	—	39	—	13,412
	Trade High Schools	14	—	—	14	4,324
	Miscellaneous Schools	11	—	8	3	3,276
	Special Schools	137	5	45	87	24,119
	Subtotal	162	7	9	146	927,899
Junior College Education	Junior Colleges	158	7	9	142	925,963
	Colleges attached to industrial firms	1	—	—	1	67
	Distance Learning Colleges	2	—	—	2	1,693
	Miscellaneous Schools	1	—	—	1	176
	Subtotal	218	44	2	172	2,357,881
University Education	Universities	169	24	2	143	1,808,539
	Teachers Colleges	11	11	—	—	23,552
	Industrial Universities	19	8	—	11	191,455
	Technical Colleges	1	—	—	1	201

	Broadcast & Correspondence Universities	1	1	—	—	308,290	118
	Distance Learning Universities	14	—	—	14	24,630	198
	Miscellaneous Schools	3	—	—	3	1,214	31
	Subtotal	25	—	—	25	272,331	1,173
Graduate School Education	Graduate Schools at Universities	<985>	<158>	<13>	<814>	269,448	896
	Graduate Schools	25	—	—	25	2,883	277

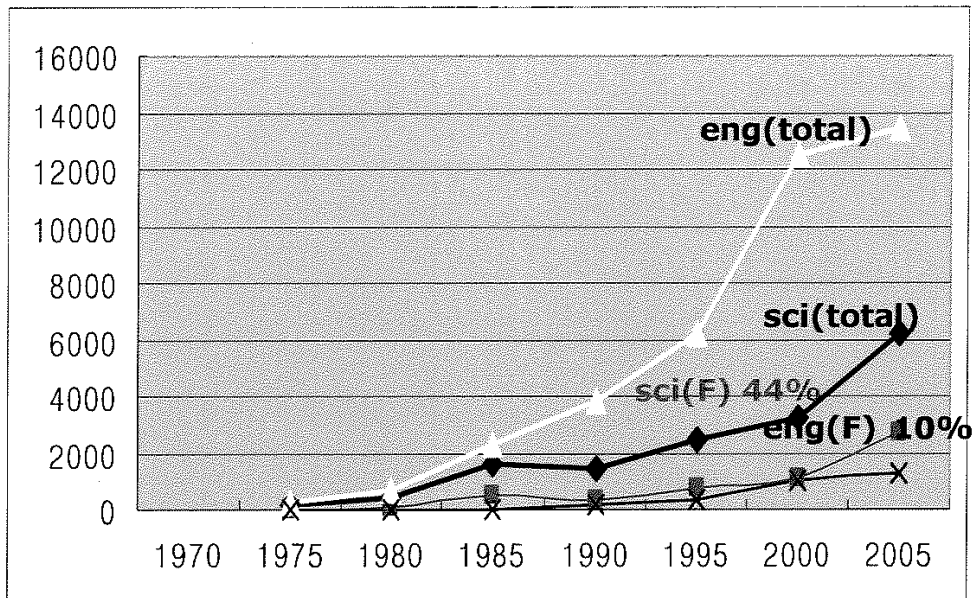
- \* 1. The number of faculty for graduate schools includes only full time professors.  
 2. < > reflects status of graduate schools and is excluded from the total figure.  
 3. Does not include branch schools.

### 3. Trends in S&T in each educational institution in Korea

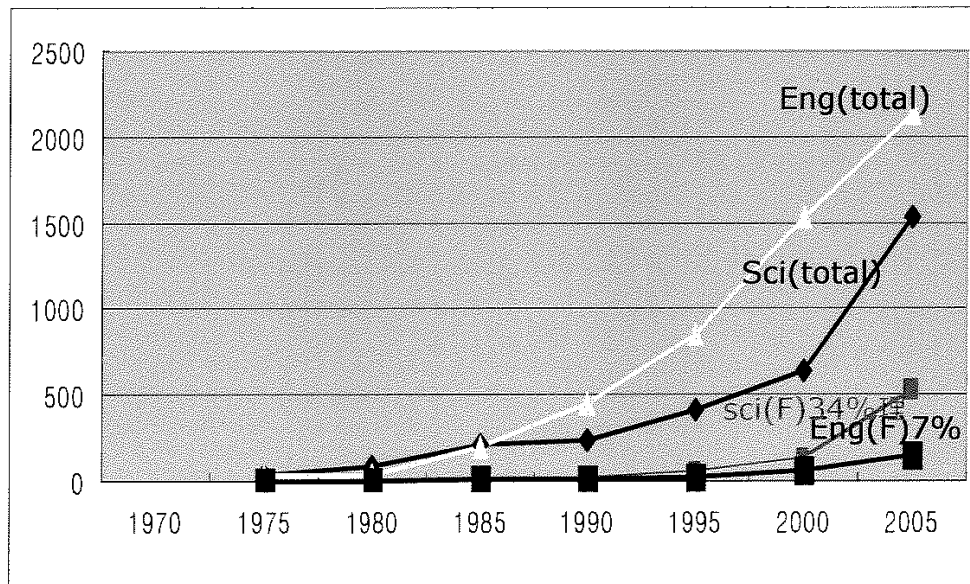
< BAs in Science & Engineering during 1970-2005 >



< MAs in Science & Engineering during 1970-2005>



< PhDs in Science & Engineering during 1970-2005>





Followings are from KWDI (Korea Women's Development Institute, [www2.kwdi.re.kr](http://www2.kwdi.re.kr))

**Junior College Students by Sex and Major Field of Study**

\* 2005 (year) Unit : percent(Persons)

	Total	Humanities	Social Science	Teaching Profession	Engineering Science	Natural Science	Medicine & Pharmacology	Arts & Physical Ed.
Total	100.0(853089)	3.9	21.6	3.8	36.2	7.3	10.4	16.9
Female	100.0(316326)	6.4	26.7	9.7	10.7	7.5	18.0	20.9
Male	100.0(536763)	2.4	18.6	0.2	51.2	7.1	5.9	14.5
%F	37.1	61.5	45.8	95.9	11.0	38.3	64.2	45.9

Source: Ministry of Education, Statistical Yearbook of Education (2004).

**Undergraduates by Sex and Major Field of Study \* 2005 (year) Unit : Percent(Persons)**

	Total	Humanities	Social Science	Teaching Profession	Engineering Science	Natural Science	Medicine & Pharmacology	Arts & Physical Ed.	Junior Teachers' College
Total	100.0(1859639)	13.5	28.1	4.3	27.9	12.6	3.4	10.1	25141
Female	100.0(684238)	21.0	28.1	7.0	9.7	14.9	4.8	14.4	17856
Male	100.0(1175401)	9.2	28.1	2.7	38.5	11.3	2.7	7.5	7285
%F	36.8	57.1	36.8	60.6	12.8	43.4	51.2	52.7	71.0

Source : Ministry of Education, Statistical Yearbook of Education(2004-2005).

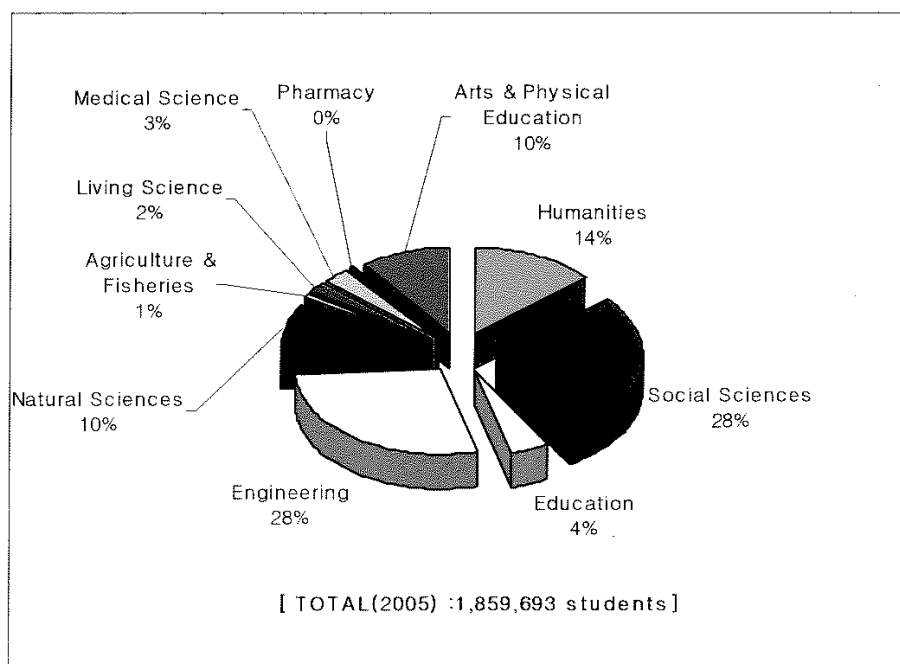
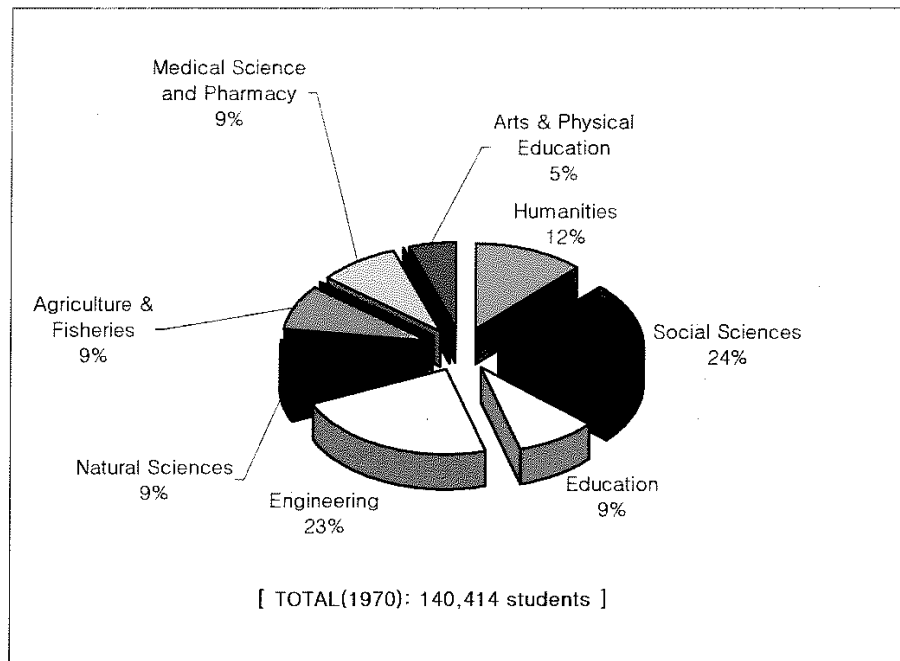
# Teachers by Position, Sex and Type of University(College)

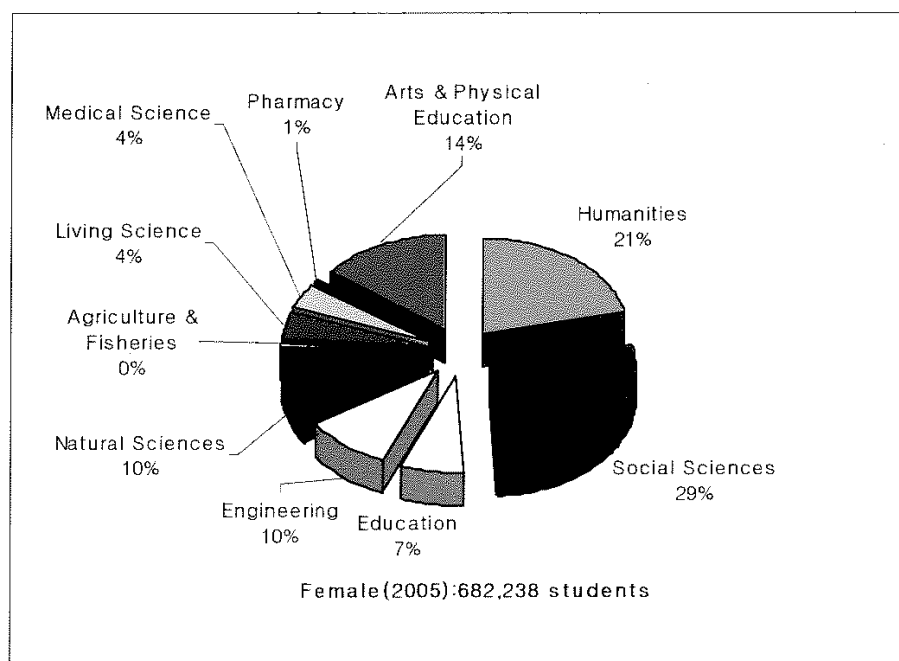
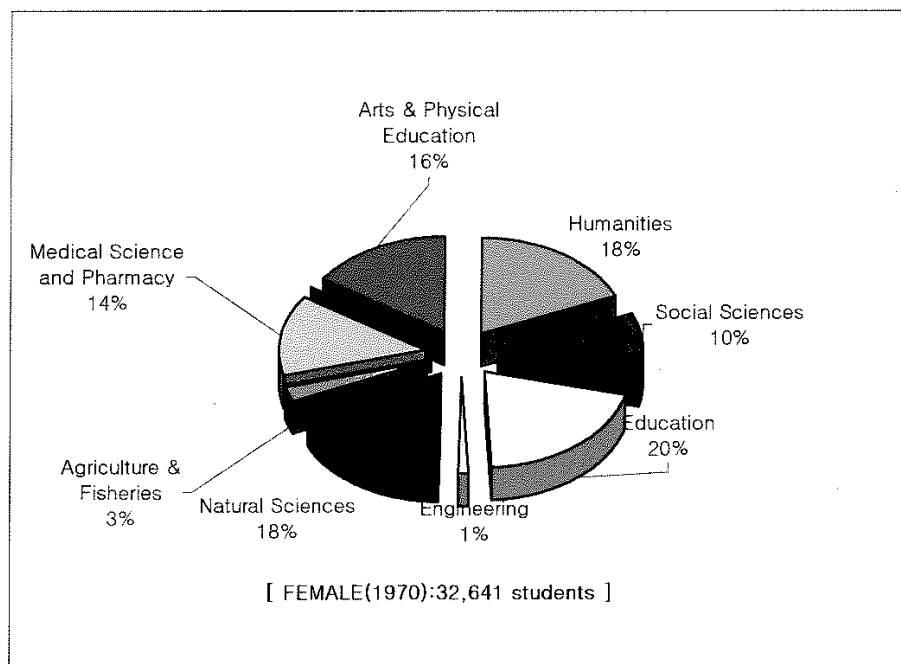
\* 2005 (year)Unit : Persons, Percent

		Total	Junior College	Univ. of Education	College & University	Korea National Open University	Industrial University	Miscellaneous School
Presidents(Dean)	Total	351	153	10	166	1	17	4
	Female	42	27		12		3	
	%F	12.0	17.6	0.0	7.2	0.0	17.6	0.0
Professors	Total	27652	2783	332	23664	84	781	8
	Female	3677	606	55	2960	22	34	
	%F	13.3	21.8	16.6	12.5	26.2	4.4	0.0
Associate Professors.	Total	15509	3717	221	10807	14	739	11
	Female	2577	861	44	1594	5	71	2
	%F	16.6	23.2	19.9	14.7	35.7	9.6	18.2
Assistant Professors.	Total	13387	3288	135	9370	20	567	7
	Female	2809	851	42	1842	4	70	
	%F	21.0	25.9	31.1	19.7	20.0	12.3	0.0
Full-Time Lecturers	Total	7948	2086	100	5193	12	554	3
	Female	2595	869	33	1565	4	124	
	%F	32.6	41.7	33.0	30.1	33.3	22.4	0.0

Source : Ministry of Education, *Statistical Yearbook of Education*(2000-2005).

#### 4. Trends in S&T in universities in Korea







# Education in Taiwan

## 1. School Patterns in Taiwan

### School Patterns

Category			Established Body	Qualifications of Admission	Period of Study	Conditions of Graduation
Pre-school Education	Kindergarten		National, Municipal, City/County, Private	Age 4 to 6	1 or 2 years	
Compulsory Education	Primary School		National, Municipal, City/County, Private	Age 6 to 15	6 years	Satisfactorily completed 6 years of schooling
	Junior High School				3 years	Satisfactorily completed 6 years of schooling
Senior Secondary Education	Senior High School		National, Municipal, City/County, Private	Graduated from junior high school; taking two basic achievement exams in junior high school; going through multi-admissions: a. By applying, b. By meeting requirements and passing the entrance exam for special subjects of the individual school, c. By registering and then being assigned.	3 years	Satisfactorily completed 3 years of schooling
	Senior Vocational School				3 years	Same as Senior High School
Higher Education	Junior College	5-Year	National, Municipal, Private		5 years	Satisfactorily completed at least 220 credits
		2-Year			2 years	Having earned at least 80 credits
	Institute of Technology (University of Technology)	4-Year	National, Private	4 years	Having earned at least 128 credits	
	Institute of Technology (University of Technology)	2-Year	National, Private	Graduated from junior college, taking the unified entrance exam; going through multi-admissions.	2 years	Having earned at least 72 credits
	University or College		National, Municipal, Private	Graduated from senior secondary school or equivalent; taking the unified entrance exam; going through multi-admissions.	4 to 7 years	Having earned at least 128 credits

	Graduate School	Master Program	National, Municipal, Private	Holder of bachelor's degree, 2-year or 5-year junior college graduate with 3-year working experience, and one passing master's degree program entrance examination	from 1 to 4 years	1.Having earned required credits, produced thesis and passed the degree test. 2. For the master's degree programs in arts or in applied sciences and technologies, the required thesis may be replaced either by the exhibition performance plus the written report or by the technical report.
		Ph. D. Program	National, Municipal, Private	Holder of master's degree, student of master's degree with excellent performance, medical science graduate with 2-year working experience. Holder of bachelor's degree with 6-year working experience of excellent performance, and one passing Ph. D. entrance examination.	from 2 to 7 years	Having earned required credits, passed the Ph. D. candidate qualification test, produced dissertation, and passed oral examination
Special Education	Special School	Kindergarten	National, Municipal, County/City, Private	Age 3 to 6		
		Primary		Age 6 to 18	6 to 12 years	Same as primary school
		Junior High		Graduated from special primary school	3 years	Same as junior high school
		Senior High (Vocational)		Graduated from special junior high school	3 years	Same as senior high (vocational) school
Supplementary and Continuing Education	Supplementary Primary School		National, Municipal, County/City	Age 12 or over	Jr. 6 to 12 month Sr. 18 to 24 month	Satisfactorily completed the period of study
	Supplementary Junior High School		National, Municipal, County/City, Private		Minimum 3 years	
	Continuing Senior Secondary School	Senior High	National, Municipal, Private	Age 15 or over; graduated from junior high school or equivalents	3 years	Satisfactorily completed 3 years schooling and passed the qualification examination.
		Senior Vocational	National, Municipal, Private	Some as continuing senior high school	3 years	The same as continuing senior high school
		Practical Technical Program	National, Municipal, Private	Age 15 or over; graduated from junior high school; having passed IQ and Aptitude test if there are many applicants	From 1 to 3 years	Satisfactorily completed 1 or 3 years program
	Continuing Junior College		National	Graduated from senior secondary school or equivalents; having passed the entrance examination	Minimum 3 years	Having earned 75 to 85 credits and passed the qualification examination
	Continuing College		National, Municipal	Age 20 or over; graduated from senior secondary school or equivalents	No limit	Having earned at least 128 credits
	Open University					

## **2. Brief notes of the educational institutions in Taiwan**

### **An Educational Overview**

The current education system in Taiwan is comprised of the following components: basic education, intermediate education, advanced education and returning education. Basic education includes kindergartens, national primary and national middle schools. Intermediate education includes vocational schools and senior high schools. Advanced education includes junior colleges, universities and graduate schools. Returning education refers to schools for continuing education and supplementary schools. In addition to the above, complete special education is provided by all level of schools for students with physical and mental disabilities.

#### **(1) The Educational Process**

The present education structure supports 22 years of formal study. Completion times are flexible, depending upon the needs of the students. Normally, the entire process requires 2 years of preschool education, 6 years of primary school, 3 years of junior high, 3 years of senior high school, 4-7 years of college or university, 1-4 years of a graduate school program, and 2-7 years of a doctoral degree program.

#### **(2) Compulsory Education for Primary and Junior High School Students**

In 1968 (SY68), a compulsory education program for primary and junior high school students, of Taiwan, Kinmen, and Matsu was implemented. A trial ten-year compulsory education program was launched in 1994 (SY94) and implemented nationwide in 1996 (SY96). This program is designed to integrate junior high school and senior vocational school curricula. Junior high school students, who are interested in beginning a program in vocational training, could now do so during the last year of their junior high school for two years. This specifically designed program addresses their needs and allows them to receive the relevant occupational training that they would need, since they are not going on for further education.

#### **(3) Senior High and Senior Vocational Education**

There are two types of institutions for students above the junior high school level. They are senior high and senior vocational schools, both being taken three years to complete. Senior vocational schools offer courses in areas such as agriculture, industry, business, maritime studies, marine products, medicine, nursing, home economics, drama and art.

#### **(4) Junior College Education**

Junior colleges fall into two categories, five- year junior college and two-year junior college, each having a different set of admission requirements. Five-year junior colleges admit junior high school graduates, and offer courses of five-year completion time. Two-year junior colleges admit senior vocation high school graduates and offer courses of two-year completion time.

#### **(5) Teacher Education and Training Programs**

In Taiwan, the teacher training programs are available at the higher education level and the duration of studies is four years. Those programs fall into the following two categories:(1) programs for training teachers of the secondary schools and institutions; and (2) programs for

training teachers of elementary schools and kindergartens. The former are primarily offered by normal universities while the latter are chiefly offered by teachers colleges. In addition, universities with the department or college of education or offering teacher education programs are eligible for teacher training education.

#### **(6) University Education**

University undergraduate programs require four years of study; however, students who are unable to fulfill their requirements within the designated time, may be granted extensions, up to two years. Specialized undergraduate programs such as dentistry or medicine require six to seven years, including an internship period of one year.

#### **(7) Graduate Education**

Graduate programs leading to a master or doctoral degree requires one to four years and two to seven years respectively. But students who enter the graduate school as part of on-job training can be granted an extension, if they fail to finish the required course or to complete their thesis/dissertation in time. The specifics will be given in the school regulations of each university.

#### **(8) Special Education**

Only designated schools are allowed to admit students who are mentally and physically challenged. Special education in preschool and primary school requires at least six years, in junior high school, three years, and in senior high and senior vocational school, three years. Otherwise special classes are offered to regular education institutions, including primary, junior, and senior high schools. At the university and college level, resource classes are provided for blind and deaf students.

#### **(9) Supplementary and Continuing Education**

Supplementary and continuing education provides citizens with an alternative way to achieve their educational goals. Based on the curriculum provided, it is classified into three main categories, including basic education, advanced study and short-term supplementary education. The study periods vary according to their curriculum design.

Note: A school year (SY) refers to a one-year period from August 1 of the current year to July 31 of the next year. For instance, SY2004 covered a period from August 1, 2004 to July 31, 2005.

### **Levels of Education**

#### **(1) Kindergarten**

Currently, most kindergartens are private-run. Public kindergartens are usually affiliated to primary schools. Pupils aged four to six are admitted for 1-2 years of schooling.

#### **(2) Primary School**

Primary schools are mostly under the jurisdiction of county/city and municipal governments. All children aged at least six qualify for primary schooling without entry tests. After six years, students graduate with a primary diploma.

### **(3) Junior High School**

Junior high schools also mostly fall under the jurisdiction of county/city and municipal governments. After implementation of the nine-year compulsory education, primary school graduates aged at least 12 qualify for junior high school education lasting for three years. Successful graduates receive a junior high school diploma.

### **(4) Senior Secondary School**

Senior high schools, run by the government or by private institutions, are classified into: senior high, senior vocational, comprehensive, single-discipline, experimental and combined high schools. Students are required to take the Basic Achievement Test before they can be admitted to senior high school by applying, by meeting requirements and passing the entrance exam of individual schools for special subjects (admission through selection), by being registered and then assigned, or by recommendation for admission. Students who complete the three years of studies with a passing grade will be granted a diploma. Most upper-secondary vocational programs are provided by senior vocational schools, some vocational programs are already being included in comprehensive high schools though. A senior vocational school graduate may choose to take a job or go on to further studies. The channels for further education are two-year junior colleges of technology and four-year programs at colleges / universities of technology.

### **(5) Junior Colleges**

Junior colleges may be government or private-run, but currently most are private. There are two- and five-year junior colleges. Students from senior high schools or senior vocational schools may be admitted to two-year junior colleges. Students are required to take entrance examinations before being admitted. There are other admission channels, including selection, registration for being allocated and assured recommendation. Students who have been in school for the stipulated minimum time period and completed all required credits will be awarded with a graduation certificate.

### **(6) Universities of Technology and Institutes of Technology**

Universities and institutes of technology are either government or private-run. They offer vocational school graduates opportunities for further studies and are classified into two-year and four-year institutes. Two-year institutes admit junior college graduates while four-year institutes admit senior vocational school graduates. Students are required to take entrance examinations before being admitted. There are other admission channels, including selection, registration for being allocated and assured recommendation. Students who have been in school for the stipulated minimum time period and completed all required credits will be awarded with a bachelor degree.

### **(7) Universities and Independent Colleges**

Universities and independent colleges may be established and run either by government or private sector. At present, flexible admission channels include allocation based on test scores of entrance examinations and entry based on selection from personal applications and



recommendations by high schools. In principle, students are required to undergo the four-year education. However, such period may be prolonged for one year or two in consideration of specific requirements of the program taken. Special practicum for an extra period from six months to two years may be added if necessary. Students who complete the required course within the designated time and fulfill all requirements for graduation shall be conferred on bachelor's degree.

#### **(8) Normal Universities and Teachers Colleges**

In Taiwan, normal universities and teachers colleges account for most of training and education for teachers of secondary and elementary schools and kindergartens. Both of the two institutions offer four-year programs of teacher education and training, and recruit students from senior secondary schools. Colleges and universities other than those aforementioned types that fulfill relevant requirements may be eligible for teacher education and training as well. In general, colleges and universities may offer secondary-education, elementary school, and kindergarten teacher education programs, and the duration of studies shall be two years in the minimum. Those institutions offering such teacher education programs are entitled to undertake affairs related to training of teachers at the level correspondent with that of the training program they offer.

#### **(9) Graduate Schools**

Public and private universities and independent colleges of good standing may establish graduate schools upon approval by the Ministry of Education. Applicants must meet specific admission criteria and pass an entrance examination administered by the school. A master's or doctoral degree will be conferred by the school only after a student has completed the graduate program of study with satisfactory performance and after passing a comprehensive examination (doctoral candidates are further required to pass a qualifying evaluation). Master's level students matriculated for at least a year and who have shown outstanding performance may be recommended to directly pursue a doctoral degree.

#### **(10) Special Schools for the Physically and Mentally Challenged**

These schools have been established for training of the visually disabled, the hearing impaired, the mentally handicapped and the physically challenged. Currently, there are 22 public and 2 private schools under this category. Admission requirements and the duration of the teaching programs are regulated by 'the Compulsory Education Law' and 'the Special Education Law'. Different academic programs have been designed to meet the specific needs of the handicapped students.

#### **(11) Supplementary and Continuing Education Schools**

These schools are either government or private-run. They are divided into six levels: adult basic education, primary and junior high supplement education, senior (vocational) high, junior college, and university continuing education. Students of university continuing education program will be granted a bachelor's degree upon completion of the program. Students under the junior college continuing education program will be conferred an associate bachelor's degree upon completion of the required credits. Students who complete junior high, senior high and vocational supplementary programs are conferred a graduation diploma. The basic educational training program has been designed for the illiterate who are at least 15 years old. Upon

completion of the training program, they are conferred a graduation certificate, which qualifies them to attend the primary supplementary program.

### **(12) Open Universities**

These schools are of two types: national and municipal open universities. They provide adults with advanced and continuing education through audio-visual mass communication media. Open university students can either be officially registered or auditing. Officially registered students, who must be 20 or older, are admitted after passing an entrance examination. There is no prerequisite educational level for those who are auditing. However, they must at least be 18 years old. Officially registered students who fulfill the program requirements are conferred a bachelor's degree.

## **Current Situation of Schools**

In SY2004, there were 8,184 schools at all levels in the Republic of China, with 274,243 full-time instructors, 5,372,346 students. On the average, there were 226 schools for every 1,000 square km of land, 237 students per 1,000 population, and 20 students per full-time instructor. Schools of each level are detailed in the following:

### **(1) Kindergarten**

Private kindergartens are most independently operated, while most public ones are affiliated with public primary schools. In SY2004, private kindergartens were 1.4 times as many as public ones. Preschool children in the private kindergartens were 2.2 times as many as public ones. The ratio of students to teachers was 11.4.

### **(2) Primary school**

Most primary schools are public. Private primary schools account for only 1%. In SY2004, there are 2,646 primary schools. The ratio of students to teachers was 18.3.

### **(3) Junior High school**

Since the launching of the nine-year compulsory education in SY68, the number of junior high schools has increased dramatically. Private junior high schools are required to adopt the same curriculum as public ones. In SY2004, out of 725 junior high schools, only 15 were private, all others were public. The ratio of students to teachers was 16.3.

### **(4) Senior High School**

Private senior high schools are required to adopt the same curriculum as public ones. In SY2004, there were 174 public senior high schools and 138 private ones, and the ratio of students to teachers was 19.4.

### **(5) Senior Vocational School**

In this category, there were 93 public schools and 68 private ones. These schools are specialized in seven fields: agriculture, industry, business, marine products, nursing, home economics, and theatre. In SY2004, the student-teacher ratio was 18.5.

The comprehensive high school, implemented on a trial basis in SY96, offers both senior high and senior vocational curricula. As of SY2004, there were 162 comprehensive high schools.

### **(6) Junior College**

Due to the government's policy of encouraging the private sectors to establish schools, private junior colleges have increased substantially to four times the number of public ones. As

for the number of students in SY2004, 5-year colleges were slightly more than 2-year colleges. There was an average ratio of 19.6 students per teacher in junior college.

Furthermore, many junior college students attend the two-year technical colleges, following the two-year and five-year junior college programs.

#### **(7) University and College**

As of SY2004, there were 75 universities, 70 colleges and 2,455 affiliated graduate program institutes. The number of school, teacher and student of private universities and independent colleges was greater than that of national ones. There was an average ratio of 19.9 students per teacher.

#### **(8) Special School**

In SY2004, there were 23 government-run special schools and 1 private ones. Among them, 3 were for the deaf, 3 for the blind, 9 for the mentally retarded, and 9 for the physically handicapped and multi-handicapped students.

#### **(9) Supplementary and Continuing Schools**

At present, the majority of primary and junior supplementary schools are public. The two open universities in Taiwan are also public. However, continuing education for junior colleges and colleges are mostly private. In SY2004, there were 599 fundamental supplementary schools, 230 senior continuing schools, 42 continuing schools for junior college level, 34 continuing schools for college level and 2 open universities.

**Number of Students Per Teacher at All levels  
In School Year 2004 ~ 2005**

	Average	Kindergarten	Primary School	Jr. High School	Sr. High School	Sr. Vocational School	Junior College	College	University	Special School
Average	19.59	11.35	18.31	16.28	19.41	18.48	19.57	19.48	20.08	3.73
Public	17.87	13.79	18.28	16.23	16.63	14.04	22.36	17.03	16.36	3.64
Private	24.94	10.52	20.84	21.09	23.95	28.94	19.32	20.06	23.57	3.00

### **Classification of Students at Senior Vocational Schools and Higher Educational Institutes**

#### **(1) Senior Vocational Schools**

In SY67, there were 94,547 senior vocational school students, accounting for two-thirds of total senior high school students. Since the nine-year compulsory education program was launched in SY68, the vocational education has experienced fast expansion to meet the demand of economic development. In SY2004, students of this category had risen to 326,159. Among these students, 140,029 majored in industry, 129,895 in commerce, 9,665 in agriculture, 33,673 in home economics, 4,982 in nursing and midwifery, 4,557 in marine products, and 3,358 in opera and arts.



## (2) Higher Educational Institutes

In SY2004, there were 1,285,867 students studying at universities, colleges, and junior colleges. Among them were 160,401 graduate program students (including 135,992 pursuing the master's degree and 24,409 pursuing the doctoral degree), 894,528 university/college students, and 230,938 junior college students (112,425 under the 2-year program and including 118,513 under the 5-year program). Out of these students, 42,778 majored in education, 34,095 in fine arts, 112,431 in humanities, 45,227 in economics, social science, and psychology, 283,430 in business administration, 16,568 in law and jurisprudence, 36,465 in natural science, 135,080 in mathematics and computer science, 125,750 in medical science, 1,467 in crafts, 282,935 in engineering, 17,565 in architecture, 27,159 in agriculture, 46,661 in home economics, 12,872 in transportation and communications, 28,363 in tourism, 22,478 in mass communication, and 14,543 in physical education.

## 3. Trends in each educational institution in Taiwan

### a. Summary of Education at all Levels SY 2004-2005

	No. of Schools	No. of Teachers	No. of Classes	No. of Students	No. of Graduates in 2003	No. of Students Per 1,000 Population
<b>Total</b>	<b>8,184</b>	<b>274,243</b>	<b>156,856</b>	<b>5,372,346</b>	<b>1,246,864</b>	<b>236.76</b>
Kindergarten	3,252	20,894	10,229	237,155	0	10.45
Primary School	2,646	102,882	63,447	1,883,533	317,510	83.01
Jr. High School	723	48,285	26,538	956,927	312,973	42.18
Sr. High School	312	33,643	9,967	409,635	119,285	18.05
Sr. Vocational Sch.	161	15,504	8,143	326,159	99,107	14.38
Jr. College	14	1,402	5,144	230,938	91,009	10.18
Uni. & College	145	47,247	25,146	1,054,929	230,799	46.49
Special School	24	1,693	602	6,119	1,728	0.27
Supplementary	905	2,610	7,104	242,420	70,789	10.68
Open University	2	83	545	24,531	3,664	1.08

**b. Percentage of Female Students at Each Level** Unit : %

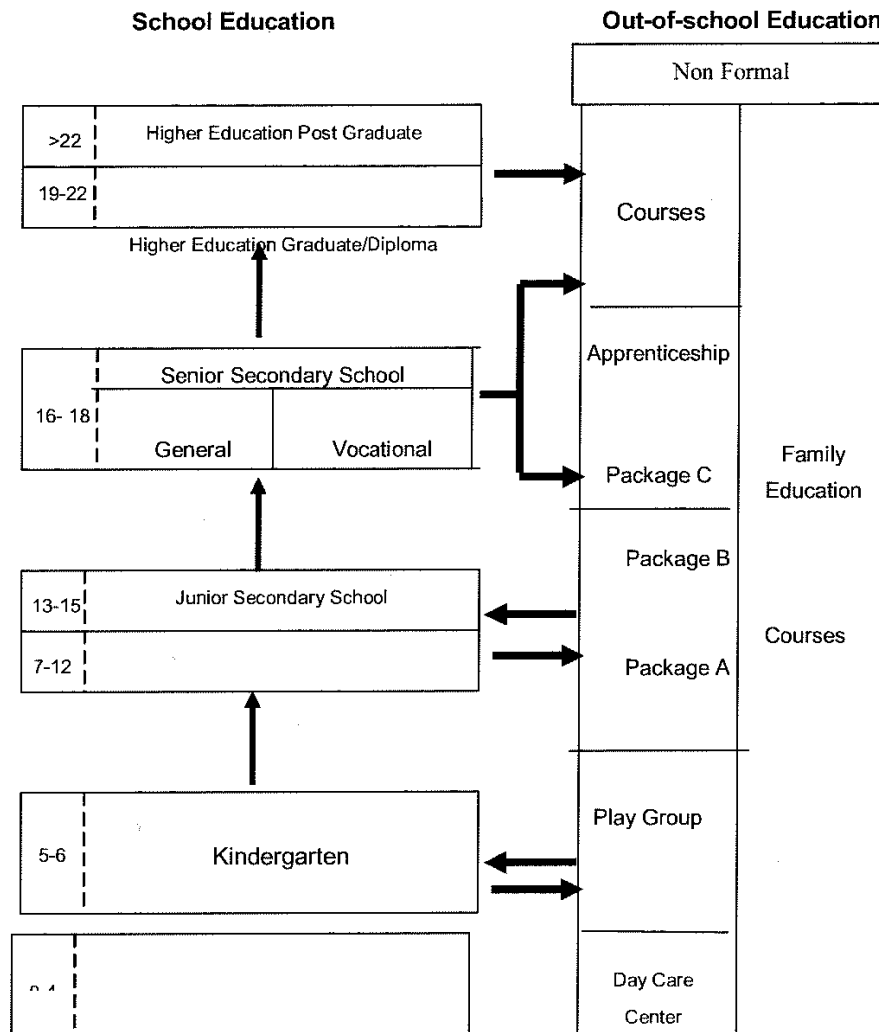
School Year	Total	Kindergarten	Primary School	Jr High School	Sr High School	Sr Vocational School	Jr College	College & Uni.	Supp. School
1950	<b>37.52</b>	43.52	38.99	28.66	27.09	15.51	10.89	-	-
1956	<b>42.80</b>	43.76	45.77	31.31	29.57	22.66	17.	19.53	19.53
1961	<b>44.60</b>	45.07	47.07	36.53	32.08	31.80	23.	25.80	25.80
1966	<b>45.37</b>	45.28	47.91	39.06	36.11	44.66	32.1	46.68	46.68
1971	<b>45.78</b>	44.77	48.41	42.33	36.97	44.06	37.27	36.45	50.74
1976	<b>46.85</b>	46.78	48.61	45.42	40.96	46.80	38.50	35.78	54.59
1981	<b>48.25</b>	46.80	48.60	47.68	44.63	50.41	42.45	40.00	58.08
1986	<b>48.75</b>	47.35	48.51	48.42	45.49	51.58	44.48	42.16	58.60
1991	<b>49.11</b>	47.81	48.48	48.57	46.57	53.97	48.67	43.30	56.49
1996	<b>49.21</b>	47.16	48.12	48.57	48.05	52.28	52.80	45.60	55.60
2001	<b>48.96</b>	48.23	47.83	48.12	49.78	48.44	53.71	47.78	55.49
2002	<b>48.89</b>	47.73	47.87	47.96	50.05	47.05	54.10	48.40	55.42
2003	<b>48.78</b>	47.52	47.92	47.83	50.22	45.55	54.84	48.78	54.37
2004	<b>48.60</b>	47.57	47.94	47.74	50.17	45.05	55.88	48.50	53.27

**c. Percentage of Female Teachers at Each Level** Unit:%

School Year	Total	Kindergarten	Primary School	Secondary	Junior College,	Special School	Supp. School
1950	26.49	93.75	30.47	16.04	7.88	32.61	10.68
1956	30.75	98.77	34.66	17.78	13.46	34.72	10.64
1961	32.52	97.04	35.77	20.76	16.69	49.49	11.52
1966	33.90	99.47	38.38	24.74	20.28	56.84	14.33
1971	39.14	98.38	43.63	35.44	22.81	55.61	19.13
1976	44.06	98.52	47.28	42.58	26.25	57.86	26.39
1981	48.50	99.08	51.57	46.04	28.14	59.55	34.71
1986	51.51	98.62	54.30	47.85	29.79	66.61	35.95
1991	55.55	98.49	60.36	52.25	31.27	69.34	37.26
2001	61.22	98.99	67.57	59.50	34.66	69.74	42.97
2002	61.59	98.06	68.06	60.24	34.53	71.16	43.57
2003	61.67	98.35	67.73	60.80	34.50	71.43	45.03
2004	61.73	98.36	67.99	61.30	32.18	70.82	44.89

# Education System in Indonesia

## 1. Organization of the School System in Indonesia



Organization of the Educational System in Indonesia



and special education. The streams, levels, and types of education can take the form of an educational unit organized by the Government, local government, and/or community.

### **Basic Education**

Basic education is the foundation for secondary education. Basic education takes the form of primary schools, junior secondary schools (general and Islamic school).

### **Secondary Education**

Secondary education is the continuation of basic education. Secondary education comprises general secondary education and vocational secondary education. Secondary education takes the form of senior general secondary schools as well as Islamic secondary school and senior vocational schools (public and Islamic schools).

### **Higher Education**

Higher education is a level of education after secondary education consisting of diploma, bachelor, master and specialized postgraduate programmes, and doctorate programmes imparted by a higher education institution. Higher education shall be provided in a flexible system. Higher education institutions can take the form of academy, polytechnic, college for specialization, institute or university. Higher education institutions shall provide education, research and community services. Higher education institutions can run academic, professional, and/or vocational and technical programmes.

### **Non-formal Education**

Non-formal education is provided for community members who need education services which functions as a replacement, complement, and/or supplement to formal education in the frame of supporting life-long education. Non-formal education is aimed at developing learners' potentials with emphasis on the acquisition of knowledge and functional skills and developing personality and professional attitudes. Non-formal education comprises life-skills education, early childhood education, youth education, women empowerment education, literacy education, vocational training and internship, equivalency program, and other kinds of education aimed at developing learners' ability.

### **Informal Education**

Informal education can be in the form of self-learning, provided by families and surroundings. The outcomes of informal education shall be recognized as being equal to the outcomes of formal education and non-formal education after passing successfully in an assessment according to national education standards.

### **Early Childhood Education**

Early childhood education is organized prior to basic education. Early childhood education is provided through formal education, non-formal education, and/or informal education. Early childhood education provided through formal education can take the form of kindergarten.

Early childhood education provided through non-formal education can take the form of play groups and child care centres.

#### **In-Service Education**

In-service education is professional education provided by concerned government department or non-department government institutions. In-service education functions to enhance the ability and skills in carrying out duties for government officials and for official candidates in concerned government departments or non-departmental government institutions. In service education is provided through formal education and non-formal education.

#### **Religious Education**

Religious education is provided by Government and/or by any group of people belonging to the same religion in accordance with the law in force. Religious education has the function to prepare learners to become community members who understand and practice religious values and/or acquire expertise in religious studies. Religious education can be conducted through formal education, non-formal education, and informal education.

#### **Distance Education**

Distance education can be organized in all streams, levels, and types of education. Distance education has the function to provide educational services to any group of people in the community who can not attend 'face-to-face' courses or regular classes. Distance education is organized in various forms, modes, and coverage supported by learning facilities and services, and an assessment system which ensures that the quality of graduates is in accordance with national education standards.

#### **Special Education and Education with Special Services**

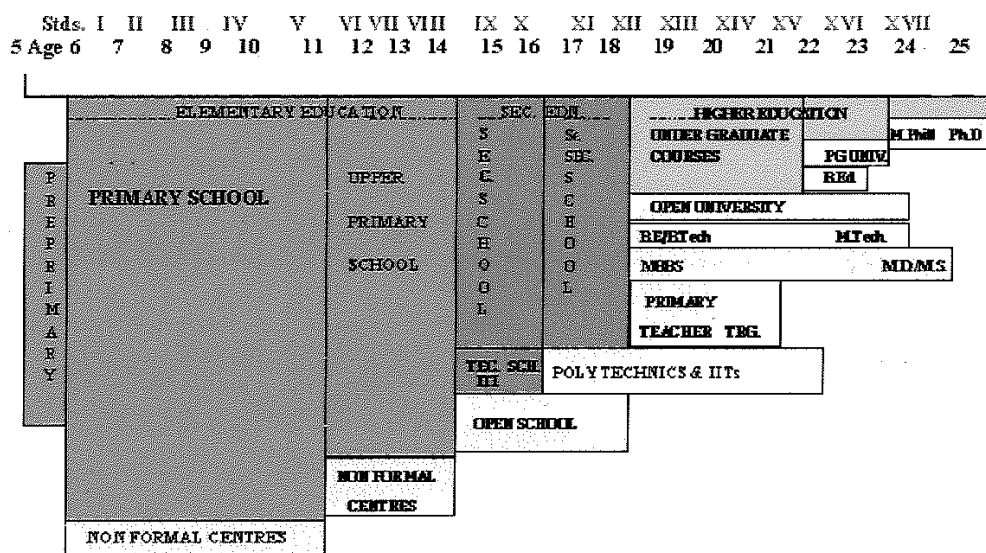
Special education is provided for learners who have difficulties in following the learning process because of physical, emotional, mental and social inefficiencies, and also for those with proven intelligence and especially gifted. Education with special services is provided for learners in the remote and less-developed areas, isolated areas, and/or for learners who are victims of natural disasters, suffer from social deficiencies, and those who are economically disadvantaged.



# Education System in India

## 1. Organization of the School System in India

STRUCTURE OF EDUCATION IN INDIA



-- COMPULSORY EDUCATION -----

SOURCE: Development of Education in India, 1990-92

### Stages of Education in India

Stages of Education in India and an indication regarding corresponding age group of students for each stage, are shown in the table below:

S. No	Stage		Classes / Duration (with exceptions, if any)	Corresponding Age Group of Students (Indicative)
<b>1.</b>	<b>School Stages</b>		I-XII	6 - 18 Years
	1.1	Elementary	I-VIII (I-VII a few States)	6 - 14 Years
	1.1.1	Primary	I - V (I - IV in a few States)	6 - 11 Years
	1.1.2	Upper Primary	VI - VIII (V - VII in a few States)	11 - 14 Years
	1.2	Secondary	IX - XII (VIII - XII in a few States)	14 - 18 Years
	1.2.1	High School	IX - X (VIII - X in a few States) (I - IV in a few States)	14 - 16 Years
	1.1.2	Higher / Senior Sec. School	XI - XII	16 - 18 Years
<b>2.</b>	<b>Higher / University Education</b>			18 - 24 Years *
	2.1	Non-Professional (e.g. Humanities / Pure Sciences / Commerce) Degree Courses		
	2.1.1	Undergraduate	3 Years	
	2.1.2	Post-graduate	2 Years	
	2.2	Professional Degree / Diploma Courses	Depends on the nature of the course	
*18 - 24 years is usually taken as the age group of students corresponding to university / tertiary education				



## **2. Brief notes of the education system in India**

The education system in India consists of:

- A) School Education
- B) Higher /University education

### **Structure of School Education**

A uniform structure of school structure, the 10+ 2 system has been adopted by all the states and union territories of India. The educational system can be divided into

- a) Pre-primary-
- b) Primary stage consisting of classes I-V
- c) the upper primary or middle stage comprising classes VI-VIII
- d) the secondary stage consisting of classes IX- X
- e) Senior Secondary consisting of XI-XII

However there remain some variations within the different states in terms of the number of classes constituting the primary, upper primary, high and higher secondary school stages.

### **Higher/University Education**

There are three principle levels of qualifications within the higher education system in the country. These are:

- Bachelor / Undergraduate level
- Master's / Post-graduate level
- Doctoral / Pre-doctoral level

#### **Bachelor / Undergraduate level**

Bachelor's degree in arts, commerce and sciences is three years of education (after 12 years of school education). In some places there are honours and special courses available. These are not necessarily longer in duration but indicate greater depth of study.

Bachelor degree in professional field of study in agriculture, dentistry, engineering, pharmacy, technology and veterinary medicine generally take four years, while architecture and medicine, it takes five and five and a half years respectively. There has been substantial growth of technical education during the post-Independence period.

There are other bachelor degrees in education, journalism and librarian-ship that are second degrees. Bachelor's degree in law can either be taken as an integrated degree lasting five years or three-year course as a second degree.

#### **Master's / Post-graduate level**

Master's degree is normally of two-year duration. It could be coursework based without thesis or research alone. Admission to postgraduate programmes in engineering and technology is done

on the basis of Graduate Aptitude Test in Engineering or Combined Medical Test respectively.

### **Diploma courses**

Diploma courses are also available at the undergraduate and postgraduate level. At the undergraduate level, it varies between one to three years in length, postgraduate diplomas are normally awarded after one year's study.

### **Pre-doctoral level/ Doctoral**

A pre-doctoral programme - Master of Philosophy (M.Phil.) is taken after completion of the Master's Degree. This can either be completely research based or can include course work as well. Ph.D. is awarded two year after the M.Phil. or three years after the Master's degree. Students are expected to write a substantial thesis based on original research. Ph.D generally takes longer.

### **Vocational Courses**

In conformity with the National Policy on Education, 1986, a scheme to provide career orientation to education was launched in 1994-95. Under the scheme, a university / college could introduce one to three vocational courses in a few identified subjects.

### **Open University System**

The Open University System was initiated in the country to augment opportunities for higher education, with the ready accessibility and flexibility as the hallmarks. It is an instrument of democratizing, making education a lifelong process, to upgrade skills at regular intervals and develop new competencies. The first Open university in the country was established by the state government of Andhra Pradesh in 1982. In 1985, the central government established the Indira Gandhi National Open University (IGNOU).

### **Adult Education**

Adult literacy and further education of the literates, has become a vital area of concern. More intensive efforts are being made to spread literacy in the rural and tribal areas which are lagging behind, with special attention to women and such marginalised groups as small and marginal farmers, landless labourers and educationally neglected tribal groups.

### **Girl's/Women's education**

Government has identified the urgent priorities as being related to the following aspects:

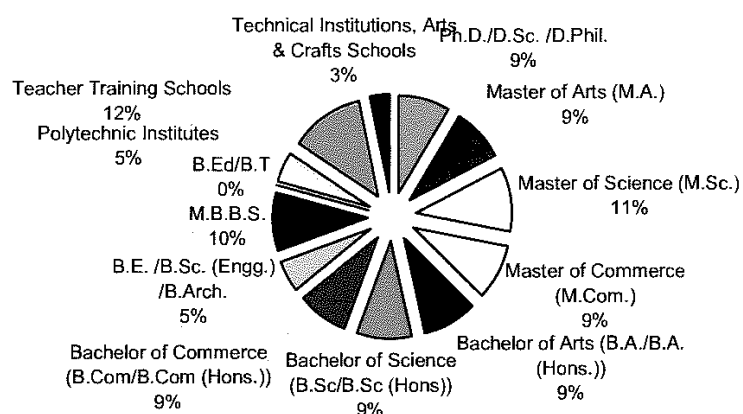
1. Assess to, and improved quality of education for girls and women,
2. Removal of obstacles that hamper active participation in education of girls and women, and
3. Elimination of gender stereotyping in education

The number of women in higher education which includes colleges, universities, professional colleges of engineering, medicine, technology, etc. has also increased from 1.32 million (33.0%) in 1990-91 to 3 million (39.8%) in 1999-2000. The number of women enrolled has shown an increase in both absolute and relative terms.

### 3. Trends in S&T in each educational institution in India

#### Percentage of Girls Enrolled for Different Courses in Higher Education (2000-2001)

% of Girls Enrolment to Total Enrolment



■ Ph.D./D.Sc. /D.Phil.	■ Master of Arts (M.A.)
□ Master of Science (M.Sc.)	□ Master of Commerce (M.Com.)
■ Bachelor of Arts (B.A./B.A. (Hons.))	■ Bachelor of Science (B.Sc/B.Sc (Hons))
■ Bachelor of Commerce (B.Com/B.Com (Hons.))	■ B.E. /B.Sc. (Engg.) /B.Arch.
■ M.B.B.S.	■ B.Ed/B.T
□ Polytechnic Institutes	■ Teacher Training Schools
■ Technical Institutions, Arts & Crafts Schools	

Enrolment of Women in Higher Education by Courses in India(1970-71 & 1995-96)		
Courses	Total No. of Women Students Enrolled	
	1970-71	1995-96
Arts	421850	1191774
Commerce	12675	309830
Science	168540	440354
Education	20799	85699
Law	2626	39551
Engineering and Technology	910	26368
Others Including Medicine, Agriculture, Veterinary Science, Music, Fine Arts/Social Work, Physical Education Etc.	28422	97562
<b>Total</b>	<b>655822 (21.9%)</b>	<b>2191138 (34.1%)</b>

Source: Status of Women in India 2001, National Commission for Women, Govt. of India.