Pattern of Gender Disparity in Education

by K B Sajjadur Rasheed

CHANGES in the socio-cultural attitudes in the world's developed countries during the 20th century have led to important revisions in the status of women. In developing countries, however, such changes have been slow and sporadic. History shows an age-old imbalance of status between the sexes that has been confirmed and perpetuated by social structure. The principal determinant in the recent changing status of women is their increasing involvement in activities hitherto inaccessible to them. And one of the most powerful instruments of this change is the entry of large number of women into educational institutions, since access to education can help them gain equal status and security in social, economic, occupational and legal spheres.

In the past three decades, enrollment of girls in schools has indeed increased rapidly, yet the figures fall far short of boys' enrollment. In Bangladesh, the wide gap in literate female (16%) and literate male (31%) population (1981 census) is a clear indicator of gender disparity in access to education in this country. The above statistics is a reflection of the bias that traditionally exists in our society for prioritization of boy's education over that of girls.

Gender disparity may be defined as the relative inferior status of girls in educational institutions in terms of enrollment and access. It is assumed that, on account of the inferior status traditionally assigned to women in this country, education for girls rarely received as much importance as for boys in most families. This discriminatory attitude at the family level is reflected in the decision making process at he public policy level where gender bias against female education is manifested through fewer access of girls to educational opportunities. In more concrete terms, there is a numerical superiority of boys over girls in school attendance. This feature also shows a regional variation in response to social, economic and historical factors.

The regional pattern of the ratio between girls and boys in school is examined at three levels, viz., (a) combined enrollment in primary and secondary schools; (b) primary schools only; and(c) secondary schools only. In each case, the number of boys per 100 girls is calculated for each of the 21 regions (former districts). The 1981 population data for three age groups (both male and female: 5-9, 10-14 and 15-19 years) are projected for 1989 for each of the 21 regions of the country. Assuming that, on an average, the secondary level school in finishes around 16 years of age, the numbers of boys and girls of 15 and 16 years of age are proportionally extracted from the age group of 15-19 years. Hence, the school-going are is measured to range from 5 to 16 years.

In the past three decades, enrollment of girls in schools has indeed increased rapidly, yet the figures fall far short of boys' enrollment. In Bangladesh, the wide gap in literate female (16%) and literate male (31%) population (1981 census) is a clear indicator of gender disparity in access to education in this country.

The girl-boy ratio for the combined category of primary and secondary schools has a wide range varying from 124 boys for 100 girls in Kushtia to 247 boys for 100 girls in Bandarban. The median value is 148 boys for 100 girls in Bogra. These ratios may be grouped into classes: the values below the lower quarter are termed as cases of low disparity implying that in these regions, the enrollment for boys is not exceedingly higher than that of girls. On the other hand, the regions with values above the upper quarter are cases of high gender disparity, i.e. , the ratio of boys to girls in those regions is disproportionately higher than the average.

The values with in the inter-quarter range are labelled as medium disparity. High disparity zones are in two parts of the country — southeast and northwest; a probable result of relatively lower levels of development in those regions together with the latent impact of social conservatism in Chittagong region. At the other extreme are the five regions of low disparity regions (Dhaka, Sylhet, Kushtia, Barisal and Faridpur), where the girl-boy ratio is less than 100:135. The medium disparity zone in mainly observed in the north-central parts of he country with values for number of boys per 100 girls varying from 135 to 157.

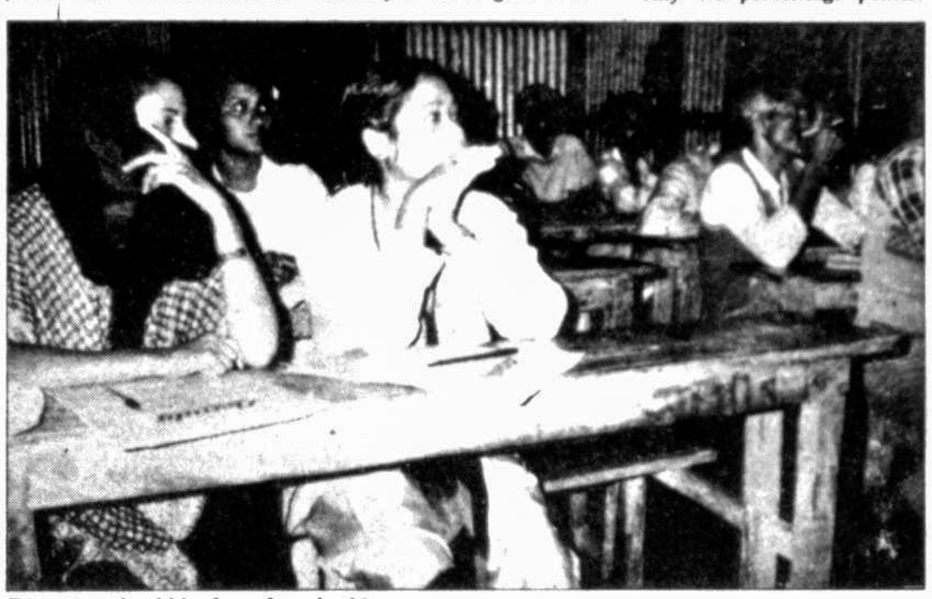
At the second level of estimating girl-boy ratio (i.e., in primary schools singly), the values range from 114 boys per 100 girls in Kushtia to 250 boys per 100 girls in Bandarban — very similar to what we find for combined primary and secondary schools enrollment. In the high disparity category, the regions are the same as in the previous level of estimate (primary and secondary schools combined), i.e., in the southeast and northwest of the country. The regions with low disparity are also the same as Dhaka, Khulna and Chittagong are include in low disparity category because of the greater number of high schools functioning in the metropolitan areas of these reasons. Kushtia and Sylhet are both low disparity regions in all of the three levels of estimate which may be explained by cultural factors for Kushtia, economic affluence in sylhet — locally manifested through expatriate remittances.

Next, the proportion of girls and boys in the 5-16 years age group, attending school, are compared to measure the level of gender disparity. In each of the 21 regions, the proportion of girls in school is lower than boys — the closest gap being in Dhaka where the proportion of boys is 7 percentage points above girls, while the widest gap is in Bandarban with a difference of 31 percentage points.

The girls' school enrollment proportions (of the total female population in 5-16 age group) range from only 22 per cent in Bandarban to 41 per cent in Chittagong Hill Tracts with national median as 34. On the other hand, the proportion of boys in school in the 5-16 years age group varies from 33 per cent in Jamalpur to 63 per cent in Dinajpur — the median for the whole country is 45. In girls' enrollment, Bandarban again ranks lowest (identified as a depressed area), while missionary schools operating for a long time in Rangamati and Khagrachhari districts have contributed to a higher enrollment percentage for girls in those areas.

The data presented above are merely a generalized approximation of the lower status of female education in the country. The regional variation in the girl-boy ratio, and the proportion of girls (in the 5-16 years age group) attending school are a function of diverse social, economic and historical factors. Nonetheless, the profile given here offers a general indicator in identifying the far-flung and socially conservative (relatively speaking) regions as zones of high disparity, while the regions with large urban population show low to medium disparity.

One observation needs to be made her, though, that during the period between 1981 and 1989, female education in the country did register some progress in numerical terms, but not upto any commendable level. The average girl — boy ratio in school enrollment for the entire country in 1988-89 was 146 boys for 100 girls — a modest improvement from 176 boys for 100 girls in 1981-82. Due to an increase of the total population, the number of girls attending school have increased in absolute terms during this period, but the relative increment of the proportion of girls in the 5-16 years age group in school — from 1981 to 1989 — was only 4.5 percentage points.



Education should be free of gender bias.

These statistics are a reminder that more actions than words are necessary in order to narrow the existing gap between male and female education in the foreseeable future.

(This is an abridged version of a paper presented by the author at the seminar on 'Women and Environment', held in Dhaka in September 1991 and organized by the Bangladesh Geographical Society and the University of Dhaka.)

Enrollment Surge Chokes Sri Lanka's University System

by Harold Pieris

SRI LANKA has expanded its university system to provide slots for many students unable to enroll in colleges.

The purpose is to maximise the chances of thousands of college-level aspirants to enter universities but couldn't do so because of limited slots available.

Education officials point out that about 125,000 students take college entrance tests each year. But only around 40,000 are qualified to obtain admission to universities.

Of this number, only around 9,000 are actually able to enroll, and this only after college facilities are extended to the limits.

In January, Sri Lanka set up the Affiliated University Colleges scheme which established nine new colleges affiliated to nine state universities.

The Presidential Commission on Youth Unrest appointed by President Ranasinghe Premadasa in 1989 reports that lack of educational opportunities is a major cause of youth unrest in Sri Lanka. This is largely because the 30,000 students who qualify but who do not gain admission to the universities have only few other education or employment opportunities.

Those few who could afford it travel overseas for schooling. Others try to enroll in the small number of private schools in the country which charge exorbitant fees.

For the remaining majority, only certain professional courses such as accountancy, law and engineering are available but enrollment slots are sadly limited.

It is against this background that the Affiliated University Colleges (AUC) was created late last year. The AUCs, university officials say, will concentrate on vocational and degree courses which are in demand. Students have the option to select any of five compulsory subjects: computer systems, management, Sri Lankan studies, environment and English.

For those who wish to study and work at the same time, the AUC will offer certificates or diplomas at the end of the second year. After this, the student can leave the institution and rejoin it later to finish a degree of his choosing.

As in the state universities, education at the AUC is free. Sri Lanka is one of the few Asian countries with free education from kindergarten to university, accounting for her 90 per cent literacy rate.

The AUC is different from the ordinary run of junior colleges in the sense that each AUC college is linked with state-run universities which take on the responsibility of conducting examinations and awarding certificates or diplomas.

Around 40,000 students are qualified to obtain admission to universities. But only around 9,000 are actually able to enroll.

The establishment of the AUCs had been opposed by students of state universities. They fear that the new colleges are meant by the government to devalue state universities which are generally a hotbed of anti-government activity.

Others aver that the AUCs will lower the high standard of the degrees awarded to university students. Critics also question the quality of education taught or acquired in the AUCs.

A senior academic known for his anti-government stance sees this as an attempt to decentralise the large campuses and thereby break the backbone of student activism.

University students believe that the answer to lack of opportunities is not to create affiliated colleges but to establish more quality universities. The government says it cannot afford this.

All this is a reflection of the core issues worrying everyone. Will there be enough jobs for all the new graduates? Will the economy expand and absorb all those turned out by the state-owned schools and the affiliated colleges? Are all courses at tertiary level job-oriented?

Others feel that the creation of the AUCs is only a stopgap measure since it would only temporarily halt thousands from entering the country's job market where there is already an unemployment rate of around 18 per cent of the work force.

It is estimated that around 10,000 university graduates are jobless. They are mainly graduates of liberal arts courses.

As an immediate measure the government has announced a job orientation scheme for unemployed graduates or "graduates awaiting work" as they are called. The skills training will involve computer programming, data processing and information technology.

Each person will be paid a sum of 1,500 rupees (US $38) a months. Around 2,000 graduates will also be enrolled as school teachers.

The proponents of the affiliated colleges, on the other hand, contend that Sri Lanka has a very low percentage of university enrollments which itself retards the growth of the economy.

They also say that the AUCs will help in creating further avenues of employment rather than cut into the available jobs for university students. Diplomas or certificates offered by the AUCs, for example, are more for mid-level employment or self-employment.

There is a high demand for the AUCs. Over 20,000 people have applied for admission to AUCs but initially only 2,000 will be enrolled. The infrastructure for the AUCs has yet to be developed.

— Depthnews Asia

Co-operation through Fellowships and Training

by Michael F L'Annunziata

EVERY year, hundreds of scientists from developing countries are awarded fellowships for training and study programmes covering peaceful applications of nuclear energy in medicine, agriculture, industry, and other fields. In the process they frequently become key links in the effective transfer of technology and knowledge for social and economic development in the Third World.

Through the IAEA's fellowship programme, more scientists are being trained than ever before in connection with more than 600 active technical co-operation projects around the world. During 1990 — a record year in terms of participation — a total of 1057 scientists took part in fellowship training programmes and scientific visits involving 75 developing countries.

For the most part, the programme's costs are met from the IAEA's Technical Co-operation and Assistance Fund (TACF); in 1990 they amounted to US $6.8 million. Additionally, the United Nations Development Programme (UNDP) provides funds for fellowships connected to certain projects. In years ahead, the total amount of financial support for fellowships is expected to approach US $10 million.

In addition to these financial resources, contributions come from IAEA Member States that host these programmes on a cost — free or gift-in-kind basis. In 1990, there were 68 countries which hosted 1057 fellows and scientific visitors. Among these, 18 countries hosted 145 fellows on a gift-in-kind basis (called a Type-II fellowship).

Why do countries host fellowships and scientific visits, and even provide this co-operative support on a gift-in-kind basis ?

Perhaps the main reason is that co-operation in scientific research and development in the less developed countries in an absolute necessity.

Numerous limitations exist in the Third World that are insurmountable obstacles to development without such co-operation. Chief among them are economic constraints which limit a host of elements necessary for development, such as equipment, education and training, and the continuous flow of current information from industrialized countries.

Relevant scientific research, and as a consequence technical development, cannot be accomplished in isolation. Without development. Third World countries would not be in any position to import and utilize new technologies, let alone develop any technology of their own.

Thus, all developing countries must strive to maintain a good scientific infrastructure. In so doing, their standards of living can be improved through the development and use of local technology, and their ability to absorb modern technology can be maintained with minimal dependence on advanced countries.

In turn, it is in the interest of industrialized countries that those nations on the road to development maintain a good scientific infrastructure. This facilitates the exportation and utilization of their newly developed technologies.

Throughout this process, fellowship training programmes and scientific visits help to build goodwill among countries - and among the key people involved in national development projects.

How fellowships benefit development

Over the past three decades, approximately 15000 men and women have been awarded an IAEA fellowship for training or scientific visit under the IAEA fellowship programme. Many of them have become leaders in professional positions that are very important to development in their countries.

To help gauge the impact of its fellowship programme on national development, the IAEA recently surveyed former fellows for their views.

Governments specifically were asked to identify former IAEA fellows who have made major contributions towards development in their countries, who have occupied important posts, or who are now filling positions in their countries that can play a key role in development.

Fellows were then asked to describe their present position and duties, and any position they held which was important in the development programme of their respective countries. They were also asked whether they felt that, in the long term, their fellowships led to any beneficial co-operation between their country and the country which hosted their fellowship.

Based on responses received, fellowship training is having a positive, lasting impact on development projects and on international co-operation in general. Some selected cases, here presented under regional headings, follow:

Asia and the Pacific

Sri Lanka. Ms Nandrani de Zoysa, Director of the National Blood Transfusion Service (NBTS) of Sri Lanka, received training in radioimmunoassay techniques and enzyme immunoassay techniques in Hepatitis B testing at National Reference Laboratory of the Canadian Red Cross Blood Transfusion Service in Toronto. As result of the training, Ms de Zoysa was able to start Hepatitis B testing on donor blood at the NBTS central blood bank in 1985, and introduced the same testing to NBTS's 40 regional blood banks in 1987.

Mr Ransi Devendra reports that his fellowship training helped him to establish the technology of radiation vulcanization of natural rubber latex in industry in his country.

Mr Devendra, who is with the Ceylon Institute of Scientific and Industrial Research, says he maintains professional contact with his former fellowship host in Japan, and that his institute is hoping to establish a bilateral project for co-operation with the Japan Atomic Energy Research Institute (JAERI).

Pakistan. Dr Saeeda Asghar, who is Head of the Division of Nuclear Medicine in the Institute of Nuclear Medicine and Oncology in Lahore and associate Professor of Nuclear Medicine at the Federal Postgraduate Medical Institute, has had two fellowships at the John Hopkins Medical Institution in the United States.

The training enable her to pass the M D examination for foreign medical graduates. When she returned to Pakistan, Dr Ashgar helped initiate the use of new technologies in the imaging of human organs, particularly for cardiac studies and dynamic studies of brain, kidneys, liver, bone, and other organs. She was awarded a second IAEA fellowship in 1990, involving 3 months of training in state-of-the-art clinical aspects of nuclear medicine with emphasis on medical diagnosis. After returning to her home country, Dr Ashgar reported to the IAEA in February 1991 that she was using her newly acquired knowledge and experience in routine patient care, in diagnosis, and for treatment of patients with radioactive material. "With the help of this training, I have been able to start some new nuclear medicine imaging procedures in our department," she said.

For many countries, scientific fellows have become an important link in the effective transfer of nuclear technologies

Philippines. Dr Carlito Aleta, Director of the Philippine Nuclear Research Institute and an IAEA fellow during 1966-67, considers his training an important element in his career.

He says it specifically equipped him with the knowledge, skills, and ability to undertake his institute's regulatory role with confidence. He further notes that the fellowship has helped in the establishment of bilateral co-operation between the United States Nuclear Regulatory Commission (USNRC) and the Philippine Atomic Energy Commission and in negotiations for co-operation with counterpart agencies in Japan.

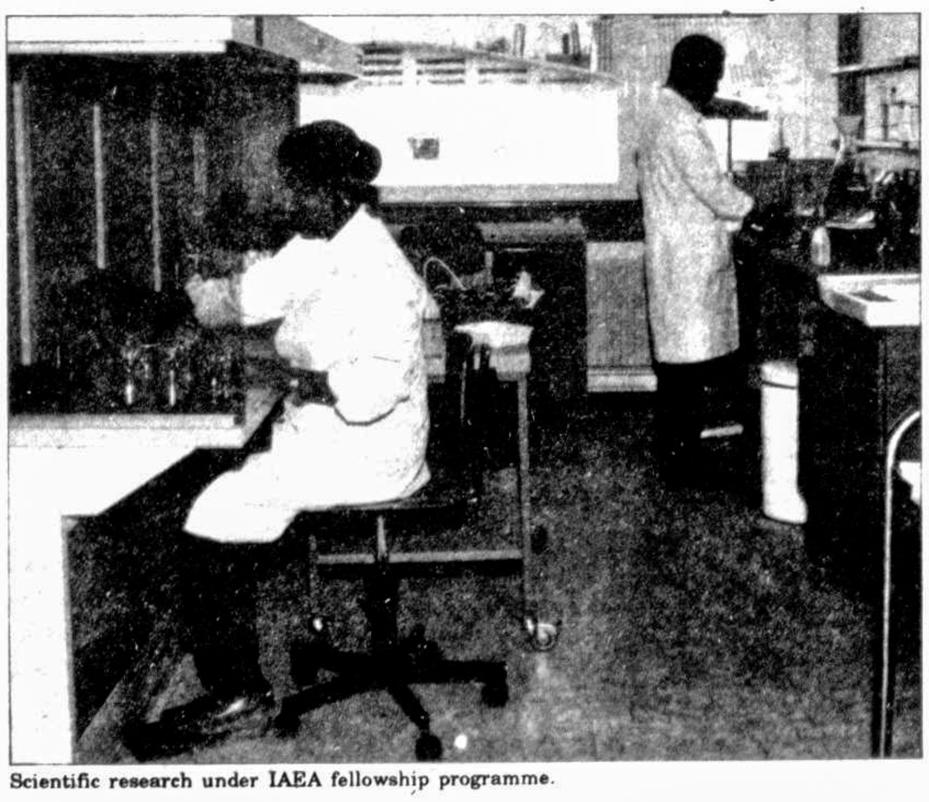
China. Mr Zhang Wanli, a divisional Director at the National Safety Administration of China (NNSA), received his fellowship training in 1986 at the USNRC.

Mr Zhang credited his on-the-job training there on the licensing process and methods to manage safety reviews as contributing to his successful management of the safety review of the Qinshan nuclear power plant. He says he continues to exchange information on nuclear regulation with counterparts there. The understanding he gained during his 6-month stay has "certainly facilitated bilateral co-operation" between the USNRC and NNSA, he says.

Malaysia. Mr Mohammed Tadza Abdul Rahman received 6 months of fellowship training at the Argonne National Laboratory in the USA in 1980. He is now Director of Inspection and Enforcement of the Atomic Energy Licensing Board of Malaysia. Mr Abdul Rahman says that his professional achievements would have been difficult without the knowledge and experience gained during his fellowship training.

Bangladesh. Mr M A Matin, who is now Head of the Radiation and Molecular Biology Division of the Institute of Food and Radiation Biology at Dhaka, received 15 months of fellowship training in the field of food irradiation at the National Institute of Hygienic Sciences in Tokyo in 1979 and 1980. He was also awarded a scientific visit in food irradiation in 1988 to Hungary, the former German Democratic Republic, and the Netherlands.

Mr Matin says, "Fellowship training has given me unique opportunities in building my career and preparing myself for the pursuit of advanced research and development and the solution of certain national problems of economic importance." Mr Matin still keeps in touch with counterparts in Japan, Hungary, Germany, the Netherlands, Pakistan and Member States of the Regional Co-operative Agreement (RCA) for Asia and the Pacific on food irradiation commercialization efforts. Bilateral arrangements for food irradiation process control and acceptance are also under way, he notes.



Scientific research under IAEA fellowship programme.

Africa, Europe and the Middle East

United Republic of Tanzania. In 1985, Mr James Boyi received 4 months of fellowship training in radiation protection in Vienna at the IAEA's Radiation Protection Services Section.

Today, he is Head of the Radiology Department of the Bugando Medical Centre in Tanzania. He also serves as radiation protection officer of the Lake Zone in Tanzania encompassing approximately one-fourth of the country's land mass. Mr Boyi further credits the fellowship training with helping him to assume the responsibilities of the National Radiation Commission Representative for his country.

Hungary. Mr Andor Andrasi, currently Head of the Health Physics Research Laboratory of the Central Institute in Physics in Budapest, was awarded a scientific visit to institutions in Austria and Germany.

He reports that the scientific visit was important in establishing personal and institutional scientific contacts which proved to be fruitful. He states, "I have continued contacts with almost all persons and institutions visited. In addition, two bilateral projects and co-operation programmes have been established with institutions in Germany and Austria in the field of personnel monitoring and environmental radioactivity monitoring."

Poland.. Mr Andrej Strupczewski, Deputy Director of WWER Safety Studies of the Institute of Atomic Energy, credits fellowship training hosted by the United States in technical areas of nuclear plant safety with directly affecting a large body of work done over about 8 years, including patents in some countries.

Turkey. Mr Omer Dogan Oner first received fellowship training back in 1960 in nuclear chemical engineering at Atomic Energy of Canada Limited. He received a second fellowship in 1964 involving 16 months of training in reactor technology at Oak Ridge National Laboratory in the United States. He later was awarded scientific visits to several countries in Europe.

Since his training, he has held some very important positions dealing with peaceful nuclear energy applications in his country. He has served as Vice President of the Turkish Atomic Energy Authority (TAEK), Scientific Adviser to the Ambassador and representative of Turkey to the IAEA, and adviser to the President of TAEK, a position that he currently holds.

Mr Oner says the fellowship training was particularly important in providing him with the experience of conducting negotiations with other countries.

Mr L'Annunziata is an IAEA field expert and the former Head of the Fellowship and Training Section in the IAEA's Division of Technical Co-operation Implementation. This article is the third in a series by the author (see IAEA Bulletin Vol. 29, No. 1 in 1987 and Vol. 30, No. 2 in 1988).

— IAEA Bulletin