

National Computer Programming Contest 1998

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Computer Technology and Education

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Computer education was formally introduced in BUET in the early '80s through setting up a new department called Department of Computer Engineering under the Faculty of Electrical and Electronics Engineering.



We can consider ourselves really fortunate in the fact that visualising enormous potential of computers our predecessors took initiatives to install the first computer, an IBM 1620, of the then Pakistan at Atomic Energy Centre, Dhaka in the early '60s. Theoretical Physics group, then working at the Atomic Energy Centre, played a decisive role in bringing the computer, which was supposed to be installed in the western wing of the country, back to Chittagong Port.

Scientists and engineers working in Atomic Energy Commission and in Dhaka University started extensive use of this computer. From then onwards other universities got introduced to this new technology. Considering our pretty average development at that time, we can be proud of introduction of computers so early in the country.

With the introduction of microprocessors, computers became more affordable in price and reduced in size. A revolution started with the availability of personal computers. Again we did not fall behind. In the early '80s PCs penetrated into our market, and our scientists, engineers and academicians did not fail to realise its far-reaching implications. Computer education was formally introduced in BUET in the early '80s through setting up a new department called Department of Computer Engineering under the Faculty of Electrical and Electronics Engineering. Initially degree at Masters level was offered in Computer Engineering for graduates of engineering and some other disciplines of general universities. Applied Physics and Electronics Department of Dhaka University also came forward to start some works with this new technology through guiding theses works and related courses. In other universities and in BITs some courses on this technology were also introduced. Revolution in PC technology in the '80s resulted in slicing down of the prices of PCs in a drastic manner, and all the time larger and larger number of PCs appeared in the local market at an affordable price.

In 1986 BUET introduced the first degree course in the Department of Computer Science and Engineering. This was then followed by Khulna, Sylhet, Rajshahi, Jahangirnagar and other universities. Dhaka University opened the Department of Computer Science with one-year Masters course for students of related fields, and finally started its undergraduate program quite late.

I must mention here that in many cases departments were opened too hurriedly. For example, we introduced this discipline in school level long before we could have teachers with appropriate education. Introduction of the course initially at Masters level and then gradually coming down would have been a more appropriate policy. This would have resulted in availability of teachers in lower levels. As usual we seem to think of missing the only train and hurriedly introduce something without proper planning.

This kind of planning does not really work for harmonious growth and development of education system. For quick training, impact of which will be in a very limited duration, this works. But education cannot be shortsighted. It must have continuity. It must have a history. It must not be isolated.

A few years back we appeared to be overactive in revolutionising our course curriculum. Interestingly this was not initiated by any educationist, and so was done easily and quickly. The more you know, the less free you are in doing whatever you like since then you understand a lot of anomalies that can come along with the drastic changes resulting from shallow thinking.

For the last ten years we talked a lot about data entry industry and finally came out as spectators of the huge business our neighbours are doing. We could have introduced education in computer field in Masters level, then in bachelors, then in colleges and finally in schools. Soon after we had graduates with Masters degree we could have opened BSc level courses initially in well-known colleges of the capital, and then to other colleges of the country. When significant number of graduates with, for example, pass degrees, came out, they could have been employed in

schools. But this was not followed. So we had to train teachers of almost any discipline hurriedly in a place called NTRAMS so that they could give computer education to our school children.

This was a disastrous decision. Computer was made an alternative course to elective mathematics. Imagine when none of the universities offering computer courses would have taken an intermediate pass student without mathematics into computer departments, we introduced computer courses sparing mathematics. Such a decision could have been taken only by persons having no understanding of the discipline. Teachers were given some kind of training hurriedly by people having no formal education in computing.

Undoubtedly they are effectively confusing our children with their blind-people view of an elephant. It may be noted here that these teachers will be teaching our kids for another 40 years, and we will not be getting rid of our errors so easily unless we plan for a good and effective training scheme for them. We always put forward the lame excuse that computer literate people will not be available for teaching in schools and colleges due to low financial emolument. We must think about it. Quality education requires similar educational quality in teachers. If we want to have it we must attract the best students of the country to teaching. However, if students could study computer science as a subject in degree pass level there would have been many graduates for teaching computer science also in schools.

Our hurried decision of introducing computer education in different universities was also not appropriate. After 15 years of introduction we still have severe shortfall of teachers. If students cannot be taught properly then it is worse. Both public and private universities are in acute shortage of teachers. Even learning about the shortfall of teachers nobody is in the back foot, every university is opening the discipline with the purchase of a few computers.

This is an unhealthy culture. Man behind the machine is more important than the machine. Mere purchasing of com-

puters cannot lead us to the goal. Whether we are capable or not courses are being introduced, students are being taken and we are unable to deliver right thing to the young students. It something is introduced. It should be done with quality. An ordinary introduction will make it much more difficult to bring in quality later.

There are hundreds of students in computer science only with 2/3 teachers in the faculty not only in public universities, where guardians are practically not paying for education but also in private universities, where they have to pay about a lac taka per annum, whereas a first class officer does not have an average earning more than that. It seems that we earn money too easily to take care of the quality of spending. With such huge an investment guardians should compel university authorities to recruit faculty members. The lame excuse of non-availability of qualified people is not acceptable, they should rather reduce their intake to offer quality education. You cannot run an organisation with a large proportion of part-timers.

Our idea of quality of education from foreigners is destroying us. The quality of foreign nationals working in our country under projects or jobs should not be unquestionable. Quite often foreign consultants come to our country as consultants with a very low expertise and are saved through our weakness to non-Bangladeshis — a great patriotic behaviour! If something is not Bangladeshi then it is good, if somebody is not Bangladeshi then he must be capable. This happens even after when we buy textile goods from foreign countries at formidable price and then be shrunk to size to see that it is made of Bangladesh.

For the last decade we have introduced and introduced computer education in all possible academic institutions without much looking into the quality. We developed syllabus to make us confident that something good will happen. If we copy MIT syllabus, are our universities turning into MIT soon? This is the quality of faculty members that matters. A good syllabus itself cannot give much unless it is followed by qualified teachers.