

Computer Training - What to LOOK for!

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WITH so many computer training centres in Dhaka and other cities of Bangladesh, one may come across individuals who proudly announce:

"I know 3 or 4 computer languages - Visual Basic, Java, Visual C++ and Oracle. I went to *so and so* Institute of Technology."

Sadly, more often than not, such a person is unable to practically use his/her vast "knowledge bank" of computer languages! Why is this?

Computer languages allow programmers to explain formulae to the computer. Regardless of the language, chosen, the formula would remain the same. We first have to understand how computers handle formulae and how a computer language is used to express formulae.

If you *really* want to learn programming, you should not be taken in by the "commercial hype" which promises to make of you - "Jack of all languages, master of none". To master just one language, after understanding the underlying logic, it would take at least 200 hours of solid application oriented *practical work* with the language to make you a proper programmer! Later, if required, you can pick up a second language relatively easily by doing a short course on it. Short courses are only for those who already understand the fundamentals of programming.

So, look for training centres that offer mastery in one language after teaching basic programming logic or principles. At the end of the language course, there must be an extensive project submission with a big report. The report would explain to the examiner how your programme is beneficial to the user. When evaluating a computer course, therefore, start by looking for subjects like:

- programming principles or logic,
- computer language and
- project submission.

Hidden professional expertise!

When computerisation takes place, three main ingredients are

involved. **Hardware** is the computer machinery you see and **manware** is the programmer who uses **software** (computer language) to write instructions for the hardware on how to carry out the clients' work. As manware will put everything together, he/she needs to understand the clients' work methods in detail before he can instruct the computer accordingly.

To find out the clients' needs, the manware needs to be able to talk to the client, i.e. the manware requires communication skills. He/she needs to understand whom to ask, what to ask and how to interpret the answers. The manware is initially a *researcher*. To be able to interpret answers, and decide what is going on, he/she needs some basic ideas about businesses and business accounting.

The manware needs to communicate with the client during the development of the software and finally prepare a presentation for the client on how the developed instructions will be implemented. In this case, the manware is a *presenter*.

A programmer provides a service, just like a lawyer. If a lawyer does not know how to talk to his/her client or present a case in the court, can he/she be successful? Communication skills are therefore an essential ingredient of the manware.

Courses which simply offer programming skills or professional exams which test computer skills are therefore not adequate. We should look for courses which include:

- Communication skills
- Business principals
- Mathematics and accounting
- Classroom of Photocopy Machines!**

There are many institutes offering courses under the umbrella of a foreign body. The foreign institutes send the study material after registration. Local teachers, in turn, have to absorb the study material and guide students. As the study material is in English, it sometimes proves to be a stumbling block both for local teachers

and local students. Unable to cope, even students who have spent their parents life savings to pay fees for the courses are sadly forced to drop out.

It has been found more often than not, that these foreign courses have not been adjusted to suit the local environment and local skill levels. In spite of ISO 9001 or international standards being flaunted indiscriminately, students are unable to absorb study material, pass examinations or even feel confident about the practical aspects of the course. To get around this problem, many courses issue "course attendance" certificates, which do not reflect the quality of the student.

Themselves lacking in in-depth computing or programming skills, some teachers insist on memorisation of the study material. The idea is that when faced with an examination question, the student should be able to recall that "the answer is on page 93" and so on. To do well therefore, students are expected to behave like a classroom of photocopy machines.

No technical subject, far less computing, can be learnt simply by memorising. Today, a computer may be put to use in a factory, tomorrow in a hospital, day-after-tomorrow in an airport.

Since foreign institutes would not be willing to tailor courses to suit local environment, the local institutes should offer **English and Basic Computing Skills** as pre-course requisites. This would help local students absorb foreign study material.

When evaluating a course therefore, look for institutes which not only have English and Basic Computing but have a:

- low student drop out rate
- reputation of applying concept based teaching techniques
- record of good average student grades in past or similar exams.

The Computer Education Pill:

Since computers have increased the general pace of our lives, we seem to have developed an idea that we can be educated faster. If it were possible to create an education pill, the first pill would be for the twelve years of schooling

leading to SSC or 'O' Levels. We could take the pill and not have to bother going to school for twelve tiresome years.

Courses which offer only 4.5 to 6 hours a week, i.e. 1.5 to 2 hours each alternate day offer to make experts of us within a very short time. These courses cater to the 'Computer Education Pill' fantasy. With such a feeble demand on the students' time, such efforts, more often than not, go to a complete waste.

In spite of all the technological advances, babies are still born with basic instincts only. If babies could be born inheriting some of the gathered experience of their parents, we would have technologically advanced babies!

With no such luck, we still have to educate our empty brains. Not only is this a long and laborious task, it is the same for every child, regardless of how bright the child may seem to be. There are no shortcuts to being educated!

We should therefore look for courses which offer *real university style education* at minimum of 4 hours per day, 20 hours per week or 1000 hours per year. We still are a long ways away from the 'Computer Education Pill' that many institutes seem to be offering us.

The dream!

The government could help the proliferation of proper courses by checking and giving recognition to institutes that offer proper education and not 'commercialised' education. Invariably, student hopes and dreams, not to mention money, are being dashed after attending the many 'commercial' education institutes. In addition, as foreign collaboration institutes would require registration fees, facilities should be given to recognised institutes to transfer registration fees in foreign exchange.

It is by creating a good computer education environment that we can produce the quality of programmers needed. Such programmers would bring about the software export breakthrough that so many Bangladeshis are dreaming about.