

## **IT/ICT Plan for Higher Education of Bangladesh: A significant investigation on present goes policy and upcoming policy recommendation**

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### **Abstract**

*In today's world, Information and Communication Technology (ICT) is considered as the most effective constituent for the development of a nation. ICT covers the vast area of information technology, communication technology and of course the telecommunication technology; categorically processing of information and ensuring connectivity. As a LDC, Bangladesh is striving to create an environment for rapid dissemination of ICT at all corners of the society. While the developed countries of the world have exploited the potential of science and technology in national development, developing countries and LDCs have fallen behind. Resource constraint, inadequate ICT capacity, and lack of appreciation of the power of ICT may be cited as the reasons. In view of that, Bangladesh has been aspiring to achieve economic development through the application of Science as well as Information and Communication Technology (ICT). The government of Bangladesh has taken steps in this connection. The Government focuses on the reduction of poverty by applying ICT, increase in efficiency, productivity, transparency, access to information by the citizens. Citizens at large will be empowered with necessary information for efficiency performing their tasks. This study tries to provide decision makers, planners, and practitioners with a summary of what is known about the potential and conditions of effective use of ICT based education and learning by drawing on knowledge, research, and experience. Moreover, in view of this study evaluation of ICT intervention and subsequent adjustments and follow-up actions Technologies have great potential for knowledge dissemination, effective learning, and efficient education services. Yet, if the educational policies and strategies are not right, if ICT based education policies are not well thought out, and if the prerequisite conditions for using these technologies are not met concurrently, this potential will not be realized.*

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### **Origin/Foundation of the Research**

Bangladesh is an over populated and developing country of South Asia. The development of IT/ICT sector of this country is really matter of thinking now a days. So, no far away those sweet days will come and Bangladesh will prove itself and fulfill world's demand in ICT/IT sector in right time by the right direction with a meaningful IT Plan as well as Higher Education for Bangladesh gone through with proper logistic support and handsome financial guarantee. There is a probe in English says "Without having an Aim as well as Plan" No nation can succeed. In Bangladesh Information Communication Technology (ICT) adoption is though very late but its success rate of this sector is proportionally very meaningful comparatively with others. This development part has been contributed by both public and private sectors, though little complexity is found in the beginning of public sector due to some government administrative problems and plan, guidance, investment and logistic support from the ICT department. But it's a matter of joy being a part of this meaningful dissertation that present government declared this department as a separated ministry with some policy and plan where its vision is very wise full and prospective. In this moment regarding ICT Plan to meet the country's demand if we establish a meaningful Plan for higher study as well as training towards IT/ICT sector hopefully it will be a major contribution for the county even though for the world and nation. In this good concern of IT/ICT Plan for Higher Education of Bangladesh could be carried out through a quantitative survey across some government and non-government participants/organizations to investigate a goal of higher education in inter-relationship between home and abroad. The result shows strong correlation amongst them, which further suggests that ICT skill; one of the components of ICT/IT knowledge is potentially a strong factor to change the typical attitude and mindset towards ICT/IT in the context of present demand. The findings have important implications in practice as well as research, which are expected to contribute in future direction of research and also in the effort to solve the complex puzzle of ICT adoption in developing country context. Moreover, this research work will be conducted to full fill the current demand of the country regarding policy establishment and plan for higher education and training which has to be carried out in ICT/IT sector and also to full fill the requirements of Ph.D degree.

### **Objectives of the Research**

#### **(i) Broad Objective**

The broad objective of this research is: A significant investigation on present situation and upcoming plan which has to be implemented near future on the basis of the demand; problems or limitation on present/past goes situation, possible upcoming guidelines, and some other aspects of Information Technology/ICT in Bangladesh.

#### **(ii) Specific Objectives**

The study has been conducted keeping the following objectives in mind:

1. To analyze past situation gone through of IT/IS higher education in Bangladesh
2. To analyze present situation goes through of IT/IS higher education in Bangladesh
3. To identify the present constraints faced by IT/IS sector regarding higher study
4. To suggest remedial measures to overcome these constraints
5. Students/Trainers effects, satisfaction & dissatisfaction

6. To define employee market availability
7. For employee expectations from the employers in both public & private organization
8. To define employer expectations from the employee in public & private sectors
9. To analyze Government present policy of ICT in Bangladesh.
10. To analyze Government present policy of ICT for higher education
11. Government policy on Board of Investment.

### **Scope of the Research**

IT/ICT sector of Bangladesh will be studied in this research work though there may be comparison, similarity, dissimilarity with others countries like Malaysia, Singapore, and India etc. Everywhere in a given country ICT is a must, especially for higher education. For a constructive research in all stages of education, mentionable for higher education I selected ICT as a good topic which is very imported for modern technological education.

### **Literature Review**

Different published Articles, Journals, Books, Ph.D research works will be studied to get an insight of this research work for better outputs. ICT for education is more critical today than ever before since its growing power and capabilities are triggering a change in the learning environments available for education (Pajo & Wallace, 2001). The use of ICT offers powerful learning environments and can transform the learning and teaching process so that students can deal with knowledge in an active, self directed and constructive way (Volman & Van Eck, 2001; de Corte et al., 2003). During the last two decades, the implementation of ICT in education has become an important topic in research on educational reform (Drent and Meelissen 2008). Research findings over the past two decades provide some evidence related to the positive effects of the use of information and communications technology (ICT) on pupils' learning (Mumtaz, 2000; Hattie, 2009). Sanyal (2001) makes a cautionary observation by quoting IIEP (1995), "Putting computers in classrooms and wiring up schools does not of itself create exciting new learning situations that are about changing the ethos of classrooms and the culture of institutions". Hawkrige et al (1990) suggested that the use of ICT could improve performance, teaching, and administration, have a positive impact on education as a whole, and develop relevant skills in the disadvantaged communities - helping in liberation and transformation. The Dakar Framework for Action (World Education Forum, Dakar, Senegal, April 2000) also stressed the use of ICT for achieving 'Education For All' (EFA) goals and recommended, "ICT must be harnessed to support EFA goals at an affordable cost. These technologies have great potential for knowledge dissemination, effective learning and the development of more efficient education services." Cox et al (1999) carried out a study examining the factors relating to the uptake of ICT in teaching. The results showed that the teachers who are already regular users of ICT have confidence in using ICT, perceive it to be useful for their personal work and for their teaching and planning to extend their use further in the future. The factors that were found to be most important to these teachers in their teaching were: making the lessons more interesting, easier, more fun for them and their pupils, more diverse, more motivating for the pupils and more enjoyable.

## **Methodology**

Population of the study is IT Training as well as tuition providing institutions and graduates from that institution both primary and secondary data will be collected for the study purpose. Primary data will be collected through face to face comprehensive interviews with a structured questionnaire. The questionnaire will be pre-tested on a small sample.

Secondary data will be collected from research articles, textbook and other published and unpublished research materials, journals on the issues. Both quota sampling and simple random sampling technique will be used for this study.

After identifying the problem thorough a secondary study has been conducted to gain a comprehensive idea of the problem. Then primary qualitative research followed by a primary quantitative research has been conducted.

## **Sources of Information**

### **(i) Primary source**

Primary data will be generated through:

- A) Investing quality foreign organizations: Private: Asia E University(Malaysia) Bangladesh Learning Center, Perdana College (Malaysia) Bangladesh Campus, APTECH(India) Bangladesh Learning Center, NIIT (India) Bangladesh Learning Center, INFORMATICS (Singapore) Bangladesh Tuition provider, Genetic Computer School (Singapore) Bangladesh Tuition Provider, NCC (UK) Bangladesh Tuition Provider, Microsoft(USA) Tuition Provider in Bangladesh through online exam.
- B) Investing quality home organizations: Public/Private: (BUET, D.U, J.U, R.U, NSU, IUB, East West University, BRAC University, AIUB) in Bangladesh that provided quality higher study/training (PGD in IT, Programming) on IT.
- C) Interviewing resource persons who got higher education/training from those organization
- D) High Officials from the govt. of Bangladesh relating with ICT sector.
- E) Interviewing some ICT experts in different scale from home and abroad

### **(ii) Secondary source**

Secondary data will be gathered through:

- A) Reports from concern ministry of Bangladesh
- B) Published Article
- C) Newspaper Article
- D) Publications of tanning providing organization

## **Limitations of the Study**

Research includes scientific and inductive thinking and it promotes the development of logical habits of thinking so in negotiation of all the prospective part some are found in presently static which will be overcome in latter is called our limitation of the research. Moreover, some other limitations are pointed out here:

- A) Limited ICT Supported Infrastructure that creates difficulties to researcher to understand the application of different topic
- B) Lack of sufficient time
- C) Limited knowledge about ICT implementation
- D) Lack of sufficient fund to run the research work

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## **Analysis and Discussion**

### **ICT and Higher Education in Bangladesh**

Bangladesh, as a least developed country is struggling to make its people educated and well skilled to meet the competition of the global village. As for delivering higher education to the optimum level, both the public and private sectors are working side by side. Bangladesh Open University (BOU), the only public initiative for offering education through distance mode. The 34 public universities are operating in conventional system in brick-and-mortar campus. There are 76 private universities in the country as well, but among them no universities offer distance mode education along with class room mode. But none of them are being able to capitalize the blessing of ICTs at optimum level with the view of offering education at all class of people throughout of the country. Bangladesh Open University is the only public institution in the country that imparts education in distance mode. In place of campus based teaching, this university uses technology including electronic devices to reach people indifferent corners of the country. The learners in this system are not restricted by time, space or age. The main objective of the university is to expand all levels of education in different dimensions in science, agriculture, humanities, and social science etc. and all other that come under the purview of human knowledge and understanding by diversity of means including the use of digital technology. It intends to provide opportunities of education to all classes of people and create efficient and skilled manpower by improving the quality of education.

Bangladesh Open University offers 2 (two) types of programs Formal and Non-formal, through 7 (seven) different schools. BOU already has launched 21 formal and 19 Non - formal programs. Formal programs consist of four levels: Certificate, Diploma, Degree and Masters. Interested people enrolled for the formal programs collect books written specially for them from Regional

Resource Centers (RRC), Coordinating Offices (CO) and Tutorial Centers (TC). Audio cassettes are also sent out. BOU prepares audio-visual materials and we have been able to arrange for 25 minutes radio broadcast every day and 20-25 minutes television broadcasts five days a week. Each year for every formal program BOU conducts two examination, one each semester. Southeast University (SEU), a private initiative tried to make its move toward the ICT-based higher education as a pioneer, despite having many challenges on its way forward besides conventional learning systems.

### **Expected Outcome/Findings**

After completing the research successfully, we will be able to bring out the outcome and findings which will be based on this research. The major findings of this research are stated below shortly:

- A) It enables the effective storing of information, and can offer new fast ways of communication;
- B) It enables the reduction of information quantity towards a higher quality and better structure;
- C) It can be integrated into teaching and learning strategies – and used to support relative learning theories;
- D) ICT (computers, Inter and Intranet) can be used to create new types of interactive learning media for improved quality, equity, and access in higher education;

- E) Most of the learned people (Teacher/Instructor) are not aware/skilled about ICT based education;
- F) Our educational infrastructures are not designed with ICT facilities;
- G) ICT facilities are available but out of reach due to high cost;

### **Recommendations**

All progress is born on inquiry. Doubt is often better than overconfidence for it leads to inquiry, and inquiry leads to invention.” So no doubt after applying all research mechanism as well as tool we will consider some opinion/arguments/recommendation for the new investors regarding **ICT Plan for Higher Education** of Bangladesh. To spread ICT Plan for Higher Education over the country the following recommendations are widely mentionable:

- A) Effective implementation of ICT in education requires commitment from the government of Bangladesh, administrators, teachers, parents, students, and the community.
- B) Lacks of resources within educational institutions are another major hindrance to the implementation of ICT in a developing country like Bangladesh that must be removed.
- C) The Government of Bangladesh has already taken some necessary steps to increase the enrollment of girls at school. Hence, strategies and proper policies should be formulated for encouraging women and girls with respect to the adoption of ICT.
- D) Local software companies should be encouraged to work together with teachers to produce Bangla software programs suitable for the teachers and students who don't know English.
- E) Moreover, effective implementation of ICT in educational institutions of Bangladesh largely depends on teachers and principals, who require in-depth professional development in terms of knowledge and skills.
- F) To implement computers in the classroom, teachers should feel confident and comfortable using computers, through the use of computers on a consistent basis for instructional activities. Teachers must understand the value of computing in education to be able to benefit their students and to support meaningful learning

### **Concluding Remarks**

The role of research in several fields of applied economics, whether related to business or to the economy as a whole, has greatly increased in modern times. The increasingly complex nature of business and government has focused attention on the use of research in solving operational problems to be more digitalized the country. Research as an aid to economic policy, has gained added importance, both the government and business. ICTs are potentially a useful tool both for managing education and teaching. Application of ICT in managing educational institutions should be encouraged, as should be used by instructors to gain access to educational materials. By teaching computer skills to youngsters, they may influence inward investment for the future society as well. This research reveals that the level of use and infrastructure of ICTs is not highly satisfactory in all forms of educational institutions to meet the current demands of ICT. But their efforts in this regards will help to build a digital society in Bangladesh in the near future as well.

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