

# Effective Utilization of ICT for Professional Development of Teachers in Bangladesh

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## Abstract

This research proposes a framework for effective utilization of ICT for professional development of teachers in Bangladesh. The research will also cover the development of strategic planning process and the essential conditions of successful technology integration for learning environment. It will also recognize essential techniques in the teacher education program for managing the process of change as technology becomes a catalyst for the transformation of the teaching-learning process. This proposal is presented based on understanding of the ground reality in the educational eco-system currently prevailing in Bangladesh.

**Key words:** ICT, Professional Development, Teachers, Students, Integration

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## I. Introduction:

The aim of this research is to provide a framework for effective utilization of ICT for professional development of teachers in Bangladesh. The use of various web-based training platforms with unique training modules, a collaborative framework and the use of specific teacher-only communication tools and resources is designed to provide new insights on the face of teaching from a creative point of view and is a practical part of this analysis. The research also will provide the guidelines for transforming the model into an educational action plan in order to contribute to improving quality standards in teaching through the use of ICT and to fill the gap in the educational needs that digital-age teachers require. The Net is an excellent place that has undeniably transformed the different interactions in the field of education.

Many teachers informed that, we should consider them 'Digital illiterates'! There is a strong need for Teacher Professional Development to enhance the quality of teachers understanding of ICT Tools through our interactions and engagements, and hence arrived conclusively that the core requirement is for teachers to become competent on using Hardware & Software tools provided to schools.

## II. Background

The initiatives that will be presented in this research will lead to ICT GER (Gross Enrolment Ratio) and lower drop-out rates in schools. Secondly, the Human Development Indices (HDI) of Bangladesh will increase significantly which have not showed great progress in terms of relative rankings among other countries as reported by UNDP (United Nations Development Program). In fact, Bangladesh will have pushed up HDI ranking higher in the next HDI ranking period with Professional development of 3.4 Lakh Teachers through digital certification, in addition to 7.4 crore students using 21st Century ICT Tools in secondary school classrooms. Thirdly, as reflected in 2015 census, Bangladesh has a 73.9% literacy rate, however with important and significant government investments in improving education in the country, Bangladesh stands a better chance of improving literacy and ranking higher among other countries in the region. And finally, improving education initiative by Bangladesh will lead to higher GER in Higher Education (Class XI – XII) and vocational institutions as students will become more connected through local and international collaboration and quality education provided in secondary education.

## Problem Statement

It is realized in the initial results that teachers learn in almost the same way the students learn. Their learning should be constructive and experiential, not passive instruction, when teachers are first exposed to a concept or teaching capacity. Authorities should provide and incorporate professional development services for teachers in a continuous and systematic manner in order to achieve transformation in education. This will contribute to teacher empowerment and help foster higher order skills in ICT competencies. Preparing students

for careers needs teaching that moves away from rote, memorization or didactic-based learning, instead of increasing students' critical thinking, problem solving, innovation & ICT or Computational Thinking Skills.

Achieving this objective involves both a shift in the conventional view of the learning process and an appreciation of how emerging digital technology can create new learning environments in which learners are engaged, able to take more responsibility for their own learning and to develop their own knowledge. Many educators and business and government leaders agree that creating a paradigm shift in the perceptions of the learning process will play an important role in bringing educational systems into line with the knowledge-based, information-rich society, combined with the applications of emerging information technologies.

### **Rationale of the study.**

ICT is today's corner stone and is widely used in education to drive students to accurately learn more effectively by giving teachers access to a wide range of vast resources. New technologies also help teachers, parents and students to enable more efficient and timelier administrative and related tasks.

ICT to be effectively embraced by ALL in the academic surroundings, the Teachers and its allied members must be groomed, trained and most important of all factors must be eager with constant motivation to improve their knowledge base to use ICT to deliver to instill EDUCATION to their students.

For a Student, a Teacher knows there is no short cut in consuming and using the knowledge for their "good." Students have to read, think, critically think, ascertain, deduce, comprehend, correlate, understand the underlying theme, hidden theme, apply the understanding of the newly gained knowledge into their daily life and with their peers. ICT can help in leaps and bound to a student to do all of this but our Teachers and their allied team has to have the knowledge to use the current ICT in addition to their teaching content. Using ICT to deliver the educators' message to the Student to learn is the new norm as compared to using Chalk and Board or Marker and White Board. ICT is the new Chalk and Board or Marker and White Board. The Education Board and the policy makers need to embrace this new paradigm.

ICT has changed the way a student is receiving the knowledge from the educators and it is the ICT that must be engrained in our Educators to ensure it is used pragmatically and efficiently to meet the efficacy of delivering the knowledge our Students need to have the core skills of Reading, critical Reading, Writing, critical Writing and Math as the back bone for their success.

The education system needs to move toward in changing the mindset, attitude and knowledge base of the educators and delivery of the education content. ICT must be part of the teaching tools that the educators must carry and with in-depth knowledge of the new tool set. One of the core shifts teachers must embrace that the Students learning paradigm is changing. Students are learning from Listening, Watching. Discovery and Exploration is the new norm of learning for the modern-day students. Memorization is the thing of past. Exploring the content, researching and applying acquired knowledge to real life problems enhances the students understanding of the knowledge taught by deeper understanding, more motivated with greater confidence of the content.

Educator in turn dig deeper in their understanding of what they are parting to the students through new and innovative way ICT helps them and cater the contents for student groups or specific student. Educators found that the students approached the teaching content through ICT more palatable and the response to educator's questions from the students are far better constructive and synthesized.

### **Research questions**

- How the use of ICT affects in educational institutes by the positive or the negative views of both teachers and students?
- Is the level of expertise of teachers is appropriate in utilization of ICT in teaching and learning?
- Are the current ICT tools along with related facilities sufficient for the teachers to get proper access to resources?
- Does the District have good internet access (connectivity) and regular power supply to facilitate ICT usage in the college?

### **Research Gap**

There are few questions of innovation and teaching practices depend on the level of ICT knowledge of the teachers and some teachers had limited knowledge owing to their level of ICT awareness. Use of contingency question items such that one only responded to items that applied to him or her solve the issue. To confirm the possibility of the veracity of responses in the questionnaire items, an observation checklist was also be used. Again, owing to the nature of technology explosion and rapid changes taking place in education institutions, the ICT integration situation in institutes in the district may change rapidly within a very short period of time, rendering the study to be obsolete.

### **III. Methodology**

The following methodology will be followed regarding the research issues.

Direct observation: in this stage, all the required data will be collected through the observation of both the environment and the users.

Survey and questionnaires: This survey part will be conducted online. The links of surveys will be sent to the teachers/educators, institute heads etc.

Moreover, a personal interview will be conducted at some particular institute, and also a set of questions will be designed for the participants. After getting the answers of the participants, inconvenience could be detected and figuring the solution will be easier than before. On the other hand, participants who are important for the survey but far to reach, they may be contacted by phone call regarding the interview.

Another way of collecting valuable data could be organizing seminars and conferences and sending the invitation to the teachers, institute heads and policy makers of education sector. If they come then they will share their ideas and also will give answers when anything is asked, so that a number of data could be collected by that process.

Furthermore, observing the underground community through online chatting and discussions will be a good way to collect information. Not only these but also posting questions and asking questions can also be the immensely valuable source of collecting information.

For this research paper, the preferable method is to include all types of institutes, so that they could participate. The collected data will be analyzed in a systematic and logical manner so that the hypothesis could be done and also if the proof or disproof could be analyzed.

### **IV. Recommendations**

Using, comprehending and understanding how ICT fits into the complex environment of classrooms is the real change and challenge in teaching environments, i.e., Classrooms and Madrasas, for our nation's future. The ICT's influence and demand in the professional development of the educators are paramount if our nation wants to be competitive in the new era of digital world.

The content for the students by the Educators is and always are being tweaked to meet the demand of the students. This practice has been in place since the time of parting education in the formal way, i.e., Primary, Secondary and Higher Education. But in the era of the digital world where the education parting has been content, research and application based, the induction of the ICT tools to deliver education content has lagged and has failed.

The educators of our nation are in the following categories.

1. Senior Educators whose embracing ICT threshold is not STRONG.
2. Seasoned Educators who are in 50% capacity threshold in ICT.
3. Educators in the teaching profession for last 5 years who has the embracing capacity around 80% in ICT.
4. Educators who are not inducted in the teaching environment and are being trained to be educators have over 90% capacity to embrace ICT.

The policy makers need to plan different modality to cater to the above types of educators to introduce, train and help them to embrace ICT in teaching their Academic content. One of the tested methods that can be tried with these categories of educators is assigning teams of Social Media or IT based Marketing professionals with the groups of Educators who can guide them to prepare and deliver the academic contents. This is a sound practice that can be tested as pilot for 100 Primary, Secondary and Higher Secondary Schools. My understanding from observing with great results in the corporate world today in using these teams of Social Media or IT based Marketing professionals with traditional Marketing "Gurus" of all level similar to that of the Educators defined above.

If the above recommendation is put to practice, the schools will change their Educators delivery method of their content and utilizing the ICT investments more effectively and the ultimate result in making our future generation more enlightened and competitive. The approach of teaching the students will change and evolve with the team of Social Media or IT based Marketing professionals into a new holistic path for the educators to innovate and ensuring our students reach greater heights.

Social Media or IT based Marketing professionals can help the educators by

1. Understanding the complex relationship between ICT use and parting teaching content.
2. Showing and comparing the best methods and tools in ICT in parting teaching content.
3. Propose alternative delivery methods using ICT in parting teaching content
4. Help the School understand the cost of ICT, i.e., Software & Hardware and its trade off

This will help to identify an effective, focused and fuel a catalyst in delivery system to the students.

## **V. Conclusion**

In this research I have shared strategies and models of teacher professional development aimed at integrating ICT into classroom teaching. I have presented a number of ideas, strategies, and models that cover design issues, the importance of shared ownership and vision, a systemic approach to teacher development, and the collaborative nature of successful professional development projects. Here there are number of influences affecting successful professional development programs, where more research is required to understand the complexities of teachers' practices and how professional development can help teachers better serve their students' needs.

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