

# Professional Development of Secondary School Teachers through ICT

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Received Dec. 14, 2017

Accepted Jan. 18, 2018

## ABSTRACT

*This study aimed at findings on professional development of secondary teachers through ICT. It focused on mainly four major aspects like knowledge of teacher (both content and pedagogy), pedagogical skill, professional experiences and suggestions regarding ICT usage by which a teacher can make him a professionally developed. Convenient sampling was employed in the selection of school district and school. After selecting school, teachers are selected randomly. In the present study 20 teachers and 5 headmasters has been taken as sample. Questionnaire having open ended questions has been given to the participant which was covered all the aspects focused above and also self-developed by the researcher. The mixed research methodology was used in the study. This study described the result qualitatively first then quantitative data supported to the qualitative result. Study revealed the opinions of teachers regarding the professional development through ICT and focused on suggestions of Headmasters on professional development.*

**Key words:-***ICT, Professional Development, Secondary Teachers*

## Introduction

In broad sense, we can say professional development is the development of a person in his/her professional career. Professional development includes formal experiences (such as attending workshop and professional meeting, mentoring etc.) and informal experiences (such as reading professional publications, watching television documentaries related to an academic discipline, etc) (Ganser, 2000). Teaching is a profession and teacher education is a process of professional preparation of teachers. Preparing one for a profession is an arduous task and it involves action from multiple factors and perspectives. Using ICT in school education appropriately is one of the aspects that can be imaginatively drawn upon for professional development and academic support of the pre-service and in-service teachers (NCFTE, 2009). With a view to achieving coordinated development of teacher, a provision of integrated development of in-service teacher education under the Open and Distance Learning (ODL) mode is one of the initiative taken by NCTE. National Policy on Education (1986) stated that pre-service and in-service teacher education is inseparable for the professional development of teachers.

Professional development for teachers is more than training or classes as it functions as an agent for change in their classroom practices. The growth of a teacher's skill and understanding is developed through personal reflection, interactions with colleagues and mentoring which gives confidence by engaging with their practices and reaffirming their experiences. NCERT (2010)

Following Strategies are given for achieving the aim of professional development of teacher at secondary school.

- Organization of workshops for content and pedagogy enrichment.
- Developing training capacity for action research projects and ICT applications (computer, radio and TV)
- Development of a set of indicators and benchmarks to track in-service professional development of teachers and the institutions which organize them.
- Development of short-term courses for continuous professional development and upload on the websites.
- Devise open and distance learning (ODL) strategies for concurrent/perennial professional development.

## Rational of the Study

Occupying higher position, dealing responsible situations effectively, to lead about a risk factor, to gain updated knowledge, acquire different skills in the own profession, became a challenge for every professional. In this era various kind of instruments has been aroused to tackle the required needs. Similarly in the case of profession like teaching, the competition among the teacher is a normal issue. Therefore the teachers are interestingly taken the responsibility to develop the professional role. But here professional

development does not mean to get promote for next level only. Here professional development means raising differences of knowledge, skill, experiences from yesterday to today. So teachers are always focusing to update their knowledge, teaching skill, broadening their professional experience etc. Teachers takes the help of different technological resources also which mayhave given support to them in professional development.

For the professional development, teacher need to gain the knowledge about the suitability of ICT resources for teaching and learning of their own subject. Secondly teacher should judge when and how to integrate ICT in to their lessons. Teacher should have competency in the use of relevant technologies, need to competent to apply these technologies appropriately to teaching; must competent in the development of resource materials and content for teaching; and competency should have in working collaboratively to improve the quality of ICT-enriched resources. (UNESCO 2007).ICT becomes a powerful tool in professional development, as it allows educators to be creative thinkers, problem-solvers, risk-takers and innovators (Koufman-Fredrick et al., 1999).Teacher professional development programmes have focused on developing teachers' knowledge (of children, the curriculum, teaching strategies, school facilities, and educational objectives) and of particular skill. These skills will allow teachers to constructs learning activities that can be implemented within the class room that will allow them to help each student, both individually and in a group context, and that will give them the necessary tools to make informed decision in their practice(Yinger, 1980; McCutcheon, 1980). Open and Distance Learning (ODL) and Information and Communication Technologies (ICT) are considered essential to replace the existing conventional approaches in professional development programmes for educators (Menon, 2005).Knowledge, attitudes, new skills values and wide verities of teaching strategies has main role to professional development of school teacher(Rout, S. &Behera, S.K. 2014). Littlejohn (2000) conducted a study on Improving continuing professional development in the use of ICT. The study revealed that a more effective CPD programme has been produced if the quality of the online courses having new knowledge and skill incorporated during the module.

## **Objectives**

1. To study about views of secondary school teachers for updating knowledge and skill through the ICT
2. To find out the professional experiences through ICT of secondary school teachers
3. To examine the suggestions of teachers, HMson professional development through ICT

## **Research Questions**

1. What extent of updated knowledge secondary school teachers has possessed?
2. What are the ICT skills used by secondary teachersin school?
3. What is the extent of professional experiences of secondary school teachers?
4. What are the suggestions on professional development of teachers, Headmasters?

## **Methodology**

A mixedresearch method has been used in the study. Exploratory sequential design was employed to analyze the data.

## **Population and Sample**

Convenient sampling has used in this study for selection of school district and schoolsFourgovt. secondary schools has selected from Nayagarh district. Five teachers from each schoolare taken as sample randomly.

## **Tools**

Open ended questionsfor teachers and interview for headmasters are employed as tools to take data. Five open ended questions inputted in the questionnaire. Same questions are also used in interview for head masters to take suggestions. The questions are focused on the aspects like knowledge, skill, and professional experience.

## **Administration of the Tools**

After selecting sampling the researcher has taken the permission of headmaster of each schoolto administer the tool on the teacher.

The researcher distributed the open ended questionnaire among teachers. After collecting the responses the researcher has focused on major responses. Then researcher set the question for interview of headmasters.

## Analysis

The qualitative responses are collected from participants. The researcher distinguished them into different aspects according to the similarity.

Aspects	Items	Major responds	Less responds
Knowledge	1. How much extent teacher can develop their knowledge through ICT?	Updated Knowledge(content and pedagogy)	Attaining different training.
	2. How can you improve your knowledge by using ICT?	Implementation of new teaching skill, ODL, mobile internet technology	Use of blogs, wiki, audio and video podcast, networking site etc. Radio, ETV
Skill	3. How can you improve your professional skill through ICT?	Technological resources,online learning, online seminar, conference, workshop, training on coursewareand software	Training Skill on handling projector, presentation package etc.
Professional Experiences	4. How can you benefitted after using ICT in the professional experiences?	Using ICT appropriately in class room.	Using technology for every task in school.
	5. How can you more experienced with ICT for improvement in the professionalism?	More provision of ICT resources, training on different pedagogical skill through ICT, skill developed training	Collaboration among teachers

## Findings and Discussions

After analyzing the qualitative data from all the participant, the researcher categorized the findings according to their similarity. The findings of the study mainly divided into following aspects which are given below.

### About Knowledge and Skill through ICT

- Most of teachers prefers online distance learning program related to the content which are given by different institutes and universities.
- Different software, courseware, e-learning are used to get updated content knowledge and pedagogical skill on respected content by some teacher.
- Some are using blogs, wiki, social networking site, audio and video podcast etc. to enhance the content knowledge and pedagogical skill.
- Some are listening the radio and watching Television program which are related to educational program. Educational TV also are observed by teachers for enhance knowledge.
- Mobile Internet was mostly used by the teacher to gain a new knowledge.

On this aspects teachers having post-graduation qualification are more connecting with ICT. The fresher teacher (below 10-15 years of experiences) are more active.

### About Professional Experience through ICT

- All teachers revealed that different Seminars, conference, workshops, online learning etc. are necessary to enhance professional experience.
- Some teachers preferred technological tools like projector, Presentation package, ms-office and other software etc. to present as professional experienced.
- Some teachers explained that they got training on different software related to different content help to enhance the professional experience.

➤ Most of teachers are attained the in-service training which are given by the department. Here some teachers (having more than 10-15 years of teaching experiences) has more professional experiences than fresher. Some fresher also use ICT with less training.

### Suggestions from Teachers and Headmasters about professional development through ICT

- Most of the teacher suggested for conducting more in service training for teachers on the use of ICT.
- Different training should give to the teacher on content knowledge.
- Skill developed training should be emphasized for every teacher in secondary school.
- More training regarding knowledge and skill of pedagogical science of each subject should be given.
- All Headmasters opined that there are requirement of more ICT resources in school premises.
- Teacher should trained in online lecture, acquainted with different courseware, and should participated in different refresher courses.
- Collaboration among teachers is necessary to develop their professional role as well as the development of whole school.

### Educational Implications

The study has focused on professional development of secondary teachers through ICT. Study revealed that for professional development the updating of content knowledge, new pedagogical skill is necessary for every teacher. But researcher found post-graduation teacher and fresher teacher are more efficient in adopting and utilizing the knowledge and skill in the field. So this study directs to govt. for providing appropriate training and large scale of resources to the teacher and also this study focused at the government to broaden the scope of professional experiences for teacher.

### Suggestion for further study

- This study was conducted with a small sample. Another study can be done in large population.
- This study conducted with secondary teacher. Similar study can be done by taking sample from other area.
- Other methodology like quantitative survey cab be used, other statistics like percentage, t-test can be employed for comparison between different variable in the study.

### Conclusions

The study has focused on professional development of secondary school teacher through ICT. Study has engrossed on improvement of professional experience of teacher and also suggested to improvement of professional development of teacher after taking opinion of teachers and headmasters.

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