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A Study of ICT Usage among Male Secondary School Teachers of B.Ed Alumni IGNOU, Institute of Advanced Studies in Education

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Abstract

Today, ICT applications are becoming indispensable parts of contemporary culture, spreading across the globe through traditional and vocational education. Usage of ICT is one of the way by which India's large population base can be effectively reached. In Indian scenario, ICT can be utilized for better teaching learning process and improving quality of education. Realising this, the Government of India has announced 2010-2020 as decade of innovation as such programme like National Programme of Technology Enhanced Learning (NPTEL) and Multimedia Educational Resource for Learning and Online Teaching (MERLOT) which create quality digital content for different levels of Education has been introduced. Given this fact, the present study attempts to find out the usage of ICT among 200 male secondary school teachers of B.Ed Alumni IGNOU, IASE in relation to their locality. The study reveals that the male teachers from urban areas are more personally equipped with using ICT in education than their rural counterparts in terms of hardware as well as skills. However, it is also evident from the study that a high percentage of the teachers from both rural and urban areas not use ICT in the class-room due to various factors like absence or limited supply of facilities in the school, absence of internet connection, lack of skills, lack of proper training etc. It is surprising to find that in the present digital world where education needs ICT for effective teaching-learning, still, there are some male secondary school teachers in both rural and urban areas who are not bothered about the use of ICT. The study also clearly depicts that even though every teacher owns a mobile phone and use it for different personal purposes like making voice calls, video calls, social networking, looking up the weather, news, online shopping, for travelling service, for educational purposes etc., some find it very difficult and problematic to use ICT in the class-room even if the equipments are available and also just within their reach. This shows that as much as the use of ICT is needed for every

teacher for successful teaching learning, many of the teachers are still not aware of the importance and usage of ICT and thus, paid no heed to it.

***Key words**- Usage, Information and Communication Technology, Male Secondary School Teachers, B.Ed. Alumni of IGNOU*

Introduction

Educational systems around the world are under increasing pressure to use the new Information and Communication Technologies (ICTs) to teach students the knowledge and skill they need in the 21st century. The 1998 UNESCO World Education Report, Teachers and Teaching in a Changing World, describes the radical implications ICTs have for conventional teaching and learning. It predicts the transformation of the teaching-learning process and the way teachers and learners gain access to knowledge and information. With the emerging new technologies, the teaching profession is evolving from an emphasis on teacher-centered, lecture based instruction to student-centered, interactive learning environments. Designing and implementing successful ICT-enabled teacher education programs is the key to fundamental, wide-ranging educational reforms. Teacher Education institutions may either assume a leadership role in the transformation of education or lag behind in the swirl of rapid technological change. To reap the full benefits of ICTs in learning, it is essential that pre and in-service teachers are able to effectively use the new tools of technology. Teacher Education institutions and programs must provide the leadership for pre and in-service teachers and model the new pedagogies and tools for learning. (Information and Communication Technologies in Teacher Education)

Objectives of the Study

The present study was carried out to find out the usage of ICT among male secondary school teachers of B.Ed Alumni of IGNOU, IASE in relation to their locality.

Delimitation of the Study:

Due to limitation of time, the present study was delimited to male secondary school teachers of B.Ed. Alumni of IGNOU, Institute of Advanced Studies in Education, Aizawl, Mizoram.

Methodology of the Study

The present study adopts descriptive survey technique method. All secondary school teachers of B.Ed Alumni of IGNOU, IASE constituted the population. The sample consists of male secondary school teachers of B.Ed Alumni of IGNOU, LSC 1913, IASE for the study. The sample includes 200 male teachers. The subjects were further divided into in two (2) categories according to their locality viz., 100 teachers from Urban and 100 teachers from Rural areas. Primary data for the study were collected by administering self-made questionnaire to the respondents.

Literature Review

This chapter presents review of related literature and writing of recognized experts, both of which have significant bearing or relation to the problem under investigation. The review of related literature in this chapter provides a related study that has been conducted worldwide these are reflected below:-

Vockell and Schwartz (1992), in their study suggested that teaching using computer assisted instruction can increase achievement because it leads to automatic lower level skills through extended practice in the higher level and for a better understanding of the teaching skills.

Pelgrum and Plomp (1993) in their findings showed that in the past few years quite drastic changes had taken place in the number of schools equipped with computers and in the number of computers available in schools. Despite this fact, in most educational systems computers still were used by a limited number of teachers, and mainly for teaching students about computers; the integration of computers in existing subjects is increasing quite slowly. The major problems that were experienced in schools deal with teacher time, the lack of sufficient software of high quality, and the training of teachers.

Brummelhuis (1995) in his research findings showed that the conditions applied for the introduction of computer use as a separate subject were not sufficient to realize the integration of computer use in other subjects than 'computer education'. Additional activities were required to realize the use of computers as a medium supporting the learning activities of students

Lankshear & Snyder (2000) findings revealed that those teachers who used ICT 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. Teachers who used ICT in classrooms have demonstrate high levels of energy, hard work and perseverance, often in the "face of considerable odds".

Doornekamp (2002) in his study where several West-European countries were compared with each other on a number of indicators with regard to the state of affairs related to ICT was found that the state of affairs related to ICT was better in lower secondary education than in primary education.

Guo, Dobson and Petrina (2008) examined the intersection of age and ICT (information and communication technology) competency and critiques the "digital natives versus digital immigrants" argument proposed by Prensky (2001a, 2001b). Findings from their study showed that there was not a statistically significant difference with respect to ICT competence among different age groups for either pre-program or post-program surveys.

Kukulska–Hulme (2009), reported that although mobile devices enable in-context interaction and content delivery, the most innovative use of mobile devices is in book marking areas of interest and creating context annotations that can trigger and support follow-up learning.

Gulkhane (2011), in his study, "Integrating ICT in Teacher Education" found that, there was no difference between male and female teacher trainees regarding their attitude in ICT. After implementing the

ICT training module, significant changes were found among teacher trainees. A large number of trainees were found to use ICT and Internet for their seminars, assignments, and review of related literature. He further made a suggestion that, Government and Managements should support teacher education institutes by giving more financial assistance to purchase ICT equipment.

UNESCO (2014), in its study on a comparative analysis of ICT integration and readiness in schools across Asia reported that as ICT adoption and use in the wider socio-economic context of countries becomes more prevalent, it becomes clear that ICT adoption and policies in education are areas that require further study. In this regard, all aspects of the ICT in education ecosystem, such as content (e.g. open educational resources (OER), free and open-source software (FOSS), and other open learning solutions), access to and use of hardware (e.g. new devices, including mobile technologies, one-to-one computing options etc.), connectivity, ICT issues related to pedagogy and learning (including digital literacy, and issues of assessment), as well as teacher training, needed to be explored in greater detail to have a fuller picture of the contribution of ICT to quality teaching and learning. Demonstrating meaningful impacts on learning and student outcomes in general were also needed urgently to help policymakers set national priorities and develop policies more effectively.

Oluwaseyi and Gbemisola (2015), in their study on ICT utilization for instructional delivery in teaching learning process in Nigerian educational system found that for effective instructional delivery at all levels of Nigerian educational system, the groundwork should be done at teacher training institutions. Teaching of methods course in the colleges should be integrated with the ICT course so as to enable the teacher trainee to acquire the ICT skills of teaching alongside the methods of teaching through modelled examples by teacher educators. The Federal Government of Nigeria should wake up from slumber and vigorously pursue the faithful implementation of her policies as it concerned ICT in education.

Pawar (2017), in his study on emerging trends in education: ICT reveals that ICT could provide diverse options for taking in and processing information, making sense of ideas, and expressing learning .Most of the students learned best through visual and tactile modalities and ICT could help these students experience the information instead of just reading and hearing it

Sahay (2018), in her findings on investigating teacher's perspectives toward ICT integration in classrooms in Delhi, INDIA suggested that a little over half of the teachers had medium level of technological skills and three-fourth of them have positive attitude, deciding to use technology, and practicing computer-based technologies on a weekly basis. The study recommended for focused teacher technological training programs to ensure that teachers' knowledge and attitude advance exponentially which could lead to stronger integration of ICT in classroom

Kapur (2019), in his study on use of ICT in improving quality of education found that when individuals were making use of technology to prepare their assignments and projects, then they were able to carry out their tasks in a convenient, manageable and well-organized manner and that individuals should

upgrade their skills and abilities and make use of ICT in the implementation of all tasks and functions within the educational institutions.

Vanlalruati (2020), in her study on the perception of students about the use of ICT in teaching learning process of Government colleges in Aizawl city revealed that students who perceived some teachers only as using ICT resources and facilities in teaching-learning process constituted the highest percentage. On the other hand, high percentage of students perceived that most teachers used power point presentation and whatsapp messenger was the most popular online tools used by the teachers for communicating with the students.

Agufana (2021), in his findings on instructional usefulness of ICT's as perceived by lecturers of Kenya reported that ICT enhanced school management, improved traditional instruction processes and improved school curricula presentation. This agreed with Makau (1990) who posited that, apart from the traditional use of ICT's in education, it can be a vehicle for improving existing school curricula and school management processes.

Analysis and Interpretation of the Data

The findings of the present study and the interpretations are discussed with the help of the following tables:

Table 1
Availability of ICT

Sl. No.		Item	Male Teachers Urban N=100	Male Teachers Rural N=100
1		Availability of	Yes %	Yes %
	a	Computer at home	67	44
	b	Computer at school	100	87
	c	Internet at home	100	100
	d	Internet at school	97	53
	e	Mobile phone	100	100
	f	Television	100	95
	g	Radio	21	65
2		Have you ever used a computer?	100	100

Analysis of the data vide Table 1, it is found that 67% male secondary school teachers in urban areas and 44% male teachers in rural areas own a computer at home. It is encouraging to find that 100% of the respondents in urban areas said computer is available in their school while 87% of the respondents in rural areas own it. Cent percent of the male teachers own a mobile phone, have internet facility at home and have used a computer. While 97% of the respondents in urban areas have internet facility at school, only 53% in rural areas have internet access in the school where they work. As high as 100% and 95% of the respondents in rural and urban areas own television at home. While majority of the male teachers in rural areas own a radio, as low as 21% of the teachers in rural areas own it.

Table 2

Ability to perform activities on a computer

Sl. No.		**Item**	**Male Teachers Urban N=100**		**Male Teachers Rural N=100**	
3		Ability to do activities	Yes %	With Help %	Yes %	With Help %
	a	Open a file	95	5	65	5
	b	Create/edit and save a document	92	7	94	5
	c	Use database to produce list of addresses	90	10	89	10
	d	Copy files to and fro from CD, pendrives etc.	95	5	94	5
	e	Move files within a computer	95	5	92	7
	f	Delete a file	100	0	100	5
	g	Print documents, pictures, graphs etc	97	2	94	5

From the above data vide Table 2, it can be observed that cent percent of the male secondary school teachers in both rural and urban areas are able to delete a file from a computer and as high as 100 – 65 per cent of the respondents have the ability to do activities on a computer, open a file, create/edit and save a

document, use database to produce list of addresses, copy files to and fro from CD, pendrives etc., move files within a computer, print documents, pictures, graphs etc. although very few percentage (2%-10%) of them needed help from others.

Table 3

Usage of ICT in teaching

Sl. No.		Item	Male Teachers Urban N=100	Male Teachers Rural N=100
5		Usage of ICT in teaching	Yes %	Yes %
			61	31
		Reason for not using computer in classroom lessons		
6	a	Lack of skills	27	44
	b	I don't bother	10	8
	c	Unavailability of facilities	24	45

The above table 3 reveals that male secondary school teachers using ICT in teaching is much higher (61%) in urban areas than their rural counterpart (31%). The percentage of male teachers in urban areas that do not use computer in the class-room lies between 27%-10% while the percentage of male teachers in rural areas who fall between this group is 45%-8%

Table 4

Purpose of using cable/satellite television

Sl. No.		Item	Male Teachers Urban N=100	Male Teachers Rural N=100
7		Purpose of using cable/satellite television	Yes %	Yes %
	a	For watching movies/films	100	95
	b	For watching the news, weather etc.	100	95
	c	For playing video games	22	12
	d	For watching educational programs	100	95
	e	For interactive educational software	35	23

An analysis of data vide Table 4 reveals that cent per cent and 95% of the male secondary school teachers in rural areas use cable/satellite television for watching movies/films, watching the news, weather and for watching educational programs. As low as 22% and 12% of the respondents in rural and urban areas use it for playing video games. While 35% of the respondents in urban areas use television for interactive educational software, 23% of the respondents in rural areas use it for such purpose.

Table 5

Purpose of using mobile phone

Sl. No.		Item	Male Teachers Urban N=100	Male Teachers Urban N=100
8		Purpose of using mobile phone	Yes %	Yes %
	a	Voice calls	100	100
	b	Video calls	100	100
	c	SMS	100	100
	d	Calendar	100	100
	e	Calculator	100	100
	f	Internet	100	100

The above table 5 shows that cent per cent of male secondary school teachers in both rural and urban areas use mobile phone for voice calls, video calls, sms, calendar, calculator, browsing and downloading from the internet either connecting to wifi or using mobile data.

Table 6

Purpose of using mobile internet

Sl. No.		Item	Male Teachers Urban N=100	Male Teachers Urban N=100
9		Purpose of using mobile internet	Yes %	Yes %
	a	News	100	100
	b	Weather	100	100
	c	Travel service	100	100
	d	Social network	100	100

	e	Sports	84	87
	f	Shopping	90	82
	g	Movie	84	92
	h	Education	100	100

It is found vide table 5 that cent percent of the male secondary school teachers in both rural and urban areas use mobile internet for educational purpose, watching the news, looking up the weather, travel service and for social networking. A high percentage of the respondents in both rural and urban areas i.e., 92%-84% use mobile internet for watching movie, sports and online shopping.

Major Findings

1. Cent per cent of the male secondary school teachers in both rural and urban areas owned a mobile phone, had internet facility at home and had usage of computer although they may or may not have knowledge about it.
2. While majority of the male teachers owned a computer at home, only 44% of the teachers in rural areas own it. This implies that the location of teachers had impact on the possession of computer in their home.
3. Although high percentage of the schools in both rural and urban areas where the respondents worked owned a computer, as high as 97% of the respondents in urban areas had internet facility at school whereas only 53% in rural areas had internet access in the school which shows location is another factor for the teachers in terms of access to internet. It also shows that teachers working in urban schools get better advantage than their rural counterpart.
4. It is also interesting to find that while majority of the respondents in rural areas still owned a radio for listening to the news and music, a low percentage of the respondents in urban areas owned it. The reason for more male teachers from rural areas owning a radio maybe due to poor internet reception to listen to the news from their mobile phone or absence of television at home.
5. It is fascinating to find that as high as 100 – 65 per cent of the respondents had the ability to do activities on a computer, open a file, create/edit and save a document, use database to produce list of addresses, copy files to and fro from CD, pendrives etc., move files within a computer, print documents, pictures, graphs etc. This shows that majority of the male secondary school teachers in both rural and urban areas have basic knowledge to the use of computer.
6. It is again a matter of location differences where we can find that male teachers using ICT in teaching is much higher in urban areas than their rural counterpart and a higher percentage of teachers in rural areas lack the skills in using ICT.
7. Another surprising finding from the study is that still, there are few percentages of male secondary teachers in both rural and urban areas who do not bother to use ICT for class-room teaching.
8. As high as 100% and 95% of the male secondary teachers in rural areas used cable/satellite television for watching movies/films, watching the news, weather and for watching educational programs.
9. Only a few respondents in both rural and urban areas use television for playing video games.
10. Less than majority of the respondents in rural and urban areas use television for interactive educational software.
11. The findings regarding the use of mobile phone clearly depicts that cent per cent of male secondary school teachers in both rural and urban areas use mobile phone for voice calls, video calls, sms, calendar, calculator, browsing and downloading from the internet either connecting to wifi or using mobile data.

12. It is also interesting to find that cent percent of the male secondary teachers in both rural and urban areas use mobile internet for educational purpose, watching the news, looking up the weather, travel service and for social networking.
13. A very high percentage of the respondents in both rural and urban areas also use mobile internet for watching movie, sports and online shopping.

Discussion and Conclusion

The study reveals that Information and Computer Technology has not been properly and appropriately adopted by male secondary school teachers of both rural and urban areas due to various factors like unavailability of facilities, ignorance, lack of skills, lack of training or the reason to not bother at all. It is the need of the hour that every teacher should be well-equipped and keep themselves updated with the latest use of technological tools. There is also the need to narrow down the quality gap between rural and urban education centres where teachers in rural areas will get the same opportunities as those of the teachers in urban areas. It is important that proper and timely training of the teachers for both rural and urban areas regarding the use of ICT should be conducted by the State-Government so as to elevate the quality of our educational system where location should not be a factor for absence, lack or ignorance of using ICT in the class-room. Application of ICT in the 21st Century inside the class-room will the keep the children more motivated, more enthusiastic, release the children from boredom as traditional method of teaching like lecture method could kill the interest and readiness of the students to learn.

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