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ICT awareness among the provincialised college teachers of Nagaon district, Assam, India

Pritilata Pegu Doley,

Assistant Professor, Raha College, Assam, India

Abstract

The present study deals with the awareness level and different types of ICT used by the provincialised college teachers of Nagaon district of Assam. It also aims to find out the effect of gender, age, location of college, teaching experience and stream of the teachers with regard to the awareness and use of Information and communication technology. Quantitative descriptive research method was employed which involves the actual survey of the identified respondents in the present study. Sample of 120 were selected for the present study from six colleges of Nagaon district of Assam, India. Self-structured questionnaire was employed to collect data which includes two sections of items. The questionnaire was analyzed with average and simple percentage. To investigate the different uses of ICT by the 120 teachers, Mean, SD, t-test is used to analyze the collected data. It is found from the study that the awareness level of the teachers of provincialised colleges is average. It is also found that there is no significant difference in the scores of the male and female teachers regarding the use of ICT, there is no significant difference in the Arts and Science teachers of provincialised colleges, no significant difference in the Arts and Science teachers and the age group of 30-45 are better in the use of ICT than the age group of 45-60 years.

Key words:1 Information,2 Communication,3 Technology,4 Awareness,5 Provincialised.

Introduction

Information and communication technology (ICT) is being considered as the technology of having far reaching consequences in the field of education. information and communication technology implies the knowledge, skills and understanding needed to exchange information verbally or non-verbally through speech, action or any electronic machine such as telephone, cellular phones, fax, radio, television, video, computer, e-mail etc. In addition to these networks, hardware and software, satellite systems, videoconferencing etc. also come under (Thakur, 2014). Now a day's improving the quality of education is a critical issue, particularly at a time of educational expansion; ICTs can enhance the quality of education in several ways; by increasing learner motivation and engagement, by facilitating the acquisition of basic skills, and by enhancing teacher training. ICTs are also transformational tools which, when used appropriately, can promote the shift to a learner centered environment. ICT supported education can promote the acquisition of the knowledge and skills that will empower student for lifelong learning, promotes increased learner engagement and encourages interaction and cooperation among students, teachers and experts regardless of where they are. It provides learners the opportunity to work with people from different cultures, thereby helping to enhance learners teaming and communicative skills as well as their global awareness (Jain, 2011).

Nowadays, teaching is becoming one of the most challenging professions in India where knowledge is expanding rapidly and much of it is available to students as well as teachers at anytime and anywhere. Therefore, teachers have to accept the demands of modern world and modify their old concepts and methods according to the needs of

learners, otherwise the teachers will become out-dated in the coming future and it will deteriorate the quality of education. There is widespread belief that ICT can and will empower teachers and learners for teaching learning processes to develop their creativity, problem solving abilities, informational reasoning skills, communication skill and other higher order thinking skills. ICT is not only used to enhance learning but also important for a teacher to be comfortable using to ensure that students get the full advantages of educational technology. Teaching with technology is different than teaching within a typical classroom. Teachers must be trained in how to plan, create and deliver instruction within a technological setting. It requires a different pedagogical approach. Consequently teacher must acquire fresh knowledge of ICT before they can prepare the future nation builders to meet the demands and challenges of the 21st century.

The present 21st century is undergoing a major revolutionary change where information and communication technology has intervened in all walks of life be it social, political or cultural. Education is no exception to it. In this world of advance information and communication technology the teacher should also keep pace and be aware of the new ICT and the way to integrate them in education so as to enhance learning in their students which is the major aim of education. Teachers of all levels of education should be able to incorporate new technologies and impart their lessons through latest trends that will affect at the cognitive domain of the learner to a greater extent. Integration of modern ICT in education have the advantages like-it motivates students to learn, improve collaborative learning, helps in understanding the subject, provides greater understanding, improve designing skills, develop critical thinking and helps in social interactions (Kidwai, 2013).

The teachers require certain new skills and competencies to manage the classroom at the same time enable the learners to make full use of their learning. In this technologically advanced era the teacher cannot remain immune to the increasing information and communication technology. The teachers, being in the forefront of the society have special duties and responsibilities than any other profession. They, being the creative heads of the society need to learn and imbibe newer techniques and technologies so as to increase understanding and learning capacity of their students. The teachers of the new breed should be technologically aware and should possess quality of knowledge management so that they can integrate ICT in their pedagogy and can present content in a different style by different teachers and they can manage the whole process of planning, organization and implementing the content in an integrated approach in an appropriate manner.

Teachers have always played a crucial role in preparing communities and societies towards exploring new horizons and achieving higher levels of progress and development. Hence effective combination of Educational technology and teaching skills contribute solutions to the problems of the country by developing desirable understanding of attitudes, skills and abilities of the students. The teachers face innumerable number of challenges in their daily classroom teaching. They are to be equipped with the most relevant research works and progress taking place in the information and communication technology in the field of teaching, communication, research and in library; this also enhances the quality of teaching, research and communication. There is an urgent need of creating awareness of ICT's among the college teachers as the emergence of a globalised world undergoing a framework of competition, and coupled with the pressure of an exploding knowledge base has given birth to new challenges for colleges all over the world. New demands are placed on the colleges often in addition to the existing ones, to be equipped with current knowledge and modern methods of acquiring knowledge. The development and implementation of information and communication technology forces today's colleges to respond social trends that point to transformation of our society into a 'knowledge based society'.

In today's world teachers need to be equipped not only with subject-specific expertise and effective teaching methodologies, but with the capacity to assist students to meet the demands of the emerging knowledge-based society. Teachers, therefore, require familiarity with new forms of information and communication technology and need to have the ability to use that technology to enhance the quality of teaching and learning. Knowledge of ICTs provides extensive opportunities which help to increase the self esteem, motivation and engagement for the part of the teachers. Teachers need encouragement to adopt such strategies rather than to feel ashamed to be taught by young learners.

Statement of the problem

The use of information and communication technologies no doubt is gaining momentum in Indian higher education. The internet is useful for faculty, staff and students in sourcing information. Information and communication technologies assist libraries in proving efficient and current information services. Once the staff and students are able to use these technologies effectively, the teaching, learning and research activities in the college will be made easier for the college community. ICT usage will facilitate development since there will be free flow of information. The electronic revolution, specifically, Internet is narrowing the information gap. The power of web technology is enabling the generator of information to disseminate their creativity at low cost and high speed. Internet is the gateway for libraries and information centers to enter the Electronic Information Era and is proving the information, generated by different organizations, institutions, research centres and individuals all over the world. Therefore, the importance of the awareness and use of ICT by teachers of colleges has been realized and selected the topic “Information and communication technology awareness among the provincialised college teachers of Nagaon district, Assam, India” for the study.

Review of related literature

Okwori O. Robert (2011) carried out a study on “Information and communication technology awareness among technical college teachers in Benue state, Nigeria”. The major findings of the study include personal collection as their source of information for teaching technical subjects and most of the technical colleges were not connected to the internet. Khedekar and Magre (2012) found that there was no significant difference in awareness about ICT of secondary students with respect to gender. Sharma and Khurad (2012) carried out a study on “Awareness and use of ICT among the college teacher: A study during the orientation programme”. In this study, the results revealed that the mean scores of teachers for the use of computer for teaching, research and extension was 56.18%, use of internet was 61.38%, use of web 2.0 tools was 50.02% and awareness regarding e-resource was 38.59%. Further analysis indicated that only 7.04% teachers were making use of computers in teaching.

Objectives of the study

1. To find out the level of awareness among the provincialised college teachers with regard to the use of information and communication technology.
2. To find out the effect of gender, age, location of college, teaching experience and stream of the provincialised college teachers with regard to the awareness and use of ICT.

Hypotheses

1. There is no significant difference between the mean scores of the male and female teachers of the provincialised colleges regarding the uses of ICT.
2. There is no significant difference between the mean scores of the Arts and Science teachers of the provincialised colleges regarding the uses of ICT.
3. There is no significant difference between the mean scores of the age group between 30-45 and 45-60 regarding the use of ICT.
4. There is no significant difference between the mean scores of the urban and rural teachers of the provincialised colleges regarding the uses of ICT.
5. There is no significant difference between the scores of teachers ranged 1-15 and 15-30 years of experience.

Methodology

The present study deals with the awareness level and different types of ICT used by the provincialised college teachers of Nagaon district of Assam. Quantitative descriptive research method was employed which involves the

actual survey of the identified respondents in the present study. For this purpose, the researcher collected data from the primary and secondary sources. For collecting secondary data, the researcher had gone through books, articles, magazines, journals, periodicals etc. on the concept of ICT and different uses of it and collected primary data from the sample selected for the study.

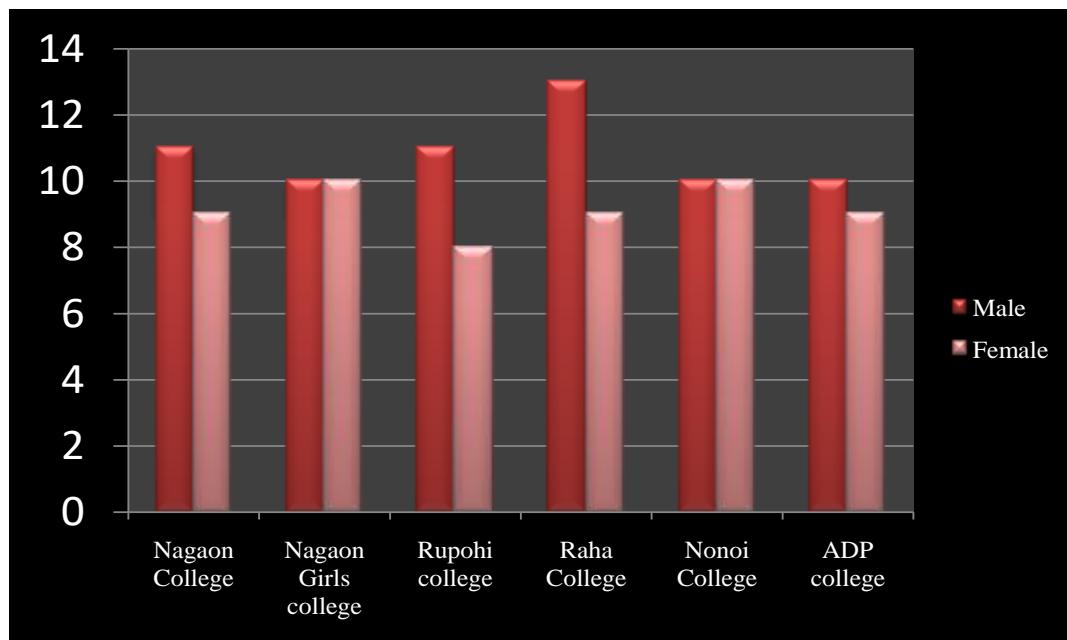
Area of the study

The provincialised colleges of the Nagaon district of Assam, India have been selected for the present study. Nagaon district is situated in the middle part of Assam, India. It is bounded by Sonitpur district and the river Brahmaputra in the north, Karbi Anglong and North Cachar in the south, Golaghat district in the east and Morigaon district in the west. Nagaon district has covered an area of 3,975 sq. km in 2011. About more than half of the populations in the district belong to Muslim community and the rest belong to Hindu, Christian and Sikh communities. According to 2001 census, the population is 23,14,629 which has further increased to 28,26,006 in 2011 census, with a male population of 14,40,307 and female population of 13,85,699.

Selection of sample

To investigate the awareness and use of ICT by the teachers of the provincialised colleges of Nagaon district, the investigator selected 120 college teachers from 6 colleges of the district. The 120 teachers representing gender, age, location of college, teaching experience and stream of the college teachers of the selected colleges.

Graph: I Showing the sample of 120 college teachers from 6 (six) colleges of Nagaon district, Assam



Selection of tool

To find out the level of awareness among the college teachers with regard to ICT, the researcher used self-structured questionnaire tool. Apart from giving self-structured questionnaire, the researcher interviewed the selected teachers for collecting different types of ICT used by the college teachers. The questionnaire consisted of two sections. First section dealt with awareness level of teachers which contained 24 items. Second section had items relating to use of

ICT in teaching, library, research, communication which includes 32 items. All the items were structured on a four-point scale of always (4 points), most of the times (3 points), sometimes (2 points) and never (1 point).

Analysis and interpretation of data

Analysis of data is the most important and decisive step in research from which results can be realized. The concepts of data analysis refer to the study on tabulated facts and figures in order to determine the inherent meanings and reaching to solution of the problem. The objective of the present study is to find out the types of ICT used by provincialised college teachers of 6 (six) provincialised colleges of Nagaon district. For this purpose, the researcher adopted descriptive analysis technique. To understand the level of awareness among the teachers, the questionnaire is analyzed with average and simple percentage. To investigate the different uses of ICT by the 120 teachers, Mean, SD, t-test is used to analyze the collected data.

Table: 1 Computed Mean and SD of the teachers on awareness and use of ICT

Number of teachers	Computed Mean	Computed SD
120	155.9	42.6

The table reveals that the observed value of Mean is 169.5 and the computed Mean value is 155.9. As there is not a large variance between the observed mean value and computed value, it can be understood that the teachers of the provincialised colleges of Nagaon district are aware about the different uses of ICT.

Table: II Mean scores, SD and t-value of the awareness and uses of ICT of male and female teachers

Teachers	N	Mean scores	SD	SE _D	t-value
Male	65	169.8	42.6	7.70	1.35
Female	55	159.32	41.6		

Above table reveals the computed t-value 1.35 is less than the criterion t-value 1.98 at 0.05 level of significance for df-118. As the computed t-value is 1.35 is not significant at 0.05 level, the hypothesis is accepted. It is understood that there is no significant difference in the scores of the male and female teachers regarding the use of ICT. The male and female teachers had an average use of ICT as the mean scores of male and female teachers are 169.8 and 159.32 respectively.

Table-III Mean scores, SD and t-value of the awareness and uses of ICT amongst the Arts and science teachers

Teachers	N	Mean scores	SD	SE _D	t-value
Arts	75	162.57	41.6	7.98	-0.64
Science	45	167.73	42.8		

The above table shows that the computed t-value (-0.64) is less than the criterion t-value 1.98 at 0.05 level of significance for df-118. It can be interpreted that there is no significant difference in the Arts and Science teachers of provincialised colleges.

Table: IV Mean scores, SD and t-value of the teachers of the age group of 30-45 and 45-60

Teachers age group	N	Mean	SD	SE _D	t-value

30-45	65	178.43	32.2	7.37	2.79
45-60	55	157.86	46		

The table shows that the computed t-value 2.79 is greater than criterion t-value 1.98 at the 0.05 level of significance for df-118. It can be understood that there is significant difference between the mean scores of the age group between 30-45 and 45-60. The table shows that the mean scores (178.43) of the age group of 30-45 is greater than the mean scores (157.86) of the age group of 45-60 years. Hence, it can be interpreted that the age group of 30-45 are better in the use of ICT than the age group of 45-60 years.

Table: V Mean scores, SD and t-value of the rural and urban teachers of the colleges

Teachers	N	Mean scores	SD	SE _D	t-value
Urban	60	171.8	42.2	7.40	4.45
Rural	60	138.83	38.8		

The table shows that the computed t-value 4.45 is greater than the criterion t-value 1.98 at 0.05 level of significance for df-118. So, it is found that there is significant difference between the mean scores of the rural and urban teachers of provincialised colleges. Above table shows that the mean scores of urban teachers (171.8) is greater than the mean scores (138.83) of rural teachers. Hence, it may be interpreted that the urban teachers are much better in the use of ICT than the teachers of rural colleges.

Table: VI Mean scores, SD and t-value of the teachers ranged 1-15 and 15-30 years of experience regarding the use of ICT

Teachers	N	Mean	SD	SE _D	t-value
Ranged 1-15 years of experience	65	168.58	44.4	8.11	1.54
15-30 years of experience	55	156.04	44.2		

The above table reveals that the computed t-value 1.54 is less than the criterion t-value 1.98 at 0.05 level of significance for df-118. As the computed t-value 1.54 is not significant at 0.05 level, the hypothesis is accepted. From this it is understood that there is no significant difference in the scores of the teachers ranged 1-15 years of experience and 15-30 years of experience. The table shows that the teachers ranged 1-15 years experience and 15-30 years of experience had an average use of ICT as the mean scores of both are 168.58 and 156.04 respectively.

Findings

1. It has been found from the study that 100% teachers are aware about Wikipedia which is free online encyclopedia. At the same time, 83.33% teachers know the full form of WWW which denotes World Wide Web. On the other hand 79.16% know about E-banking, 91.6% teachers know about E-learning, 92.5% teachers know about teleconferencing which means a sophisticated telephone meeting among two or more participants involving technology.
2. It has also been found from the study that 90% teachers are aware about Edu-sate which means the first Indian satellite built to serve the educational sector, 80% teachers know about the device of Skype which is a device to make free video and audio calls, 100% teachers know about facebook, 75.85% of them know about Excel as a spreadsheet program, 82.5% teachers know about cloud computing as a storing and accessing data and program over the internet instead of computers hard disk, 71.6% teachers are aware about Academis.edu which is a social networking website for academicians to share papers, monitor their

impact and follow the research in a particular field. 74.16% teachers are aware about the Sodhganga as a national repository of electronic theses and dissertations, 85.5% know INFLIBNET as information and library network centre. 73.3% teachers know about OPAC which denotes Online Public Access Catalog where 93.3% of them know about PPT which denotes Power Point Presentation.

3. The table-I reveals that the observed value of Mean is 169.5 and the computed mean value is 155.9. As there is not a large variance between the observed mean value and computed value, it can be understood that the overall awareness level of the teachers of the provincialised colleges are average. Similar study has been conducted by Sharma and Khurad (2012) where he revealed that the mean scores of teachers for the use of computer for teaching, research and extension was 56.18%, use of internet was 61.38%, use of web 2.0 tools was 50.02% and awareness regarding e-resource was 38.59%.
4. The table-II reveals that the computed t-value 1.35 is less than the criterion t-value 1.98 at 0.05 level of significance for df-118. It is understood that there is no significant difference in the scores of the male and female teachers regarding the use of ICT. The male and female teachers had an average use of ICT as the mean scores of male and female teachers are 169.8 and 159.32 respectively. Similar study had been conducted by Khedekar and Magre (2012) where he found that there was no significant difference in awareness about ICT of secondary students with respect to gender.
5. The table-III shows that the computed t-value (-0.64) is less than the criterion t-value 1.98 at 0.05 level of significance for df-118. It is found from the study that there is no significant difference in the Arts and Science teachers of provincialised colleges.
6. The table-IV shows that the computed t-value 2.79 is greater than criterion t-value 1.98 at the 0.05 level of significance for df-118. It can be understood that there is significant difference between the mean scores of the age group between 30-45 and 45-60. The table shows that the mean scores (178.43) of the age group of 30-45 is greater than the mean scores (157.86) of the age group of 45-60 years. It is understood that the age group of 30-45 are better in the use of ICT than the age group of 45-60 years.
7. Table -V shows that the computed t-value 4.45 is greater than the criterion t-value 1.98 at 0.05 level of significance for df-118. So, it is found that there is significant difference between the mean scores of the rural and urban teachers of provincialised colleges. It is found from the study that the urban teachers are much better in the use of ICT than the teachers of rural colleges.
8. Table-VI reveals that the computed t-value 1.54 is less than the criterion t-value 1.98 at 0.05 level of significance for df-118. As the computed t-value 1.54 is not significant at 0.05 level, the hypothesis is accepted. From this it is understood that there is no significant difference in the scores of the teachers ranged 1-15 years of experience and 15-30 years of experience. It is found from the study that the teachers ranged 1-15 years experience and 15-30 years of experience had an average use of ICT as the mean scores of both are 168.58 and 156.04 respectively.

Conclusion

ICTs have the potential to accelerate, enrich and deepen skills, to motivate and engage students as well as strengthening teaching and helping students. The integration of information and communication technologies with teaching helps to revitalize teachers and students. This can help to improve and develop the quality of education by providing curricular support in difficult subject areas. ICT is important in teaching because it increases the flexibility of delivery of education so that learners can access knowledge anytime and from anywhere. It can influence the way students are taught and how they learn as now the processes are learner driven and not by teachers. It prepares the learners for lifelong learning as well as to improve the quality of learning.

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