ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 8.4
IJAR 2021; 7(5): 259-263
www.allresearchjournal.com
Received: 28-03-2021
Accepted: 30-04-2021

Manzoor Ahmad Wagay
Research Scholar, Department of Education, Bhagwant University, Ajmer, Rajasthan, India

Dr. RKS Arora
Professor, Department of Education, Bhagwant University, Ajmer, Rajasthan, India

Corresponding Author:
Manzoor Ahmad Wagay
Research Scholar, Department of Education, Bhagwant University, Ajmer, Rajasthan, India

An analysis of information and communication technology usage of secondary school students

Manzoor Ahmad Wagay and Dr. RKS Arora

Abstract
ICT has become a force that has changed many aspects of the way we live and every aspect of human endeavour. Therefore, its integration into the classroom will significantly improve the educational experience. Keeping in view, the present study was intended to explore the ICT usage of students on the basis of thief gender. 100 students were selected for the purpose of analysis. The required data was selected by using ransom sampling technique. The results of the study reveal that their seems significant difference between male and female students. Male students were seen with high level of ICT users as compared female students.

Keywords: information and communication technology usage, secondary school students

Introduction

Information and Communication Technology (ICT) has become a force that has changed many aspects of the way we live and every aspect of human endeavour such as education, medicine, business, law and engineering. Education is a socially oriented activity and quality education has traditionally been associated with teachers having high degrees of personal and face-to-face contact with students. But with the world moving rapidly into digital media and information, the role of ICT in education is becoming more and more important. However, indicators on technology uptake and use in education in the secondary schools in Ghana are missing and most of the schools continues to use the traditional method for knowledge dissemination. Today, the educational sector of Ghana is confronted with series of changes and reforms. Numerous strategies for teaching and learning have been developed which correspond to the accommodation of students' need and diverse learning method. One of such strategy involves the 2 use of information and communication technology (ICT). ICT has become a force that has changed many aspects of the way we live and every aspect of human endeavour. Therefore, its integration into the classroom will significantly improve the educational experience. ICT is the use of technology in managing and processing information with the use of electronic computer system and computer software to convert, store, protect, process, transmit and retrieve information. Oje (2005) states that awareness towards the use of ICT is increasing in the classroom in the developing world such that mere verbalization or over verbalization of words alone to communicate ideas, skills and attitude to educate learners is futile. ICT has snow become integral part of teaching and learning in schools. It provides opportunities for both teachers and students to learn how to operate in an information and technology age. ICTs are drastically changing schools syllabus in a number of ways, demanding that teachers focus on new teaching methodologies instead of relying on traditional methodologies. As Hare (2007) puts it, the successful integration of technology in education is not simple, because it depends on such interlinking variables. Today, development has brought about evaluation of ICT, which is ever growing and continuously affecting every aspect of human endeavour. Thus, the teacher using ICT in the class will be able to present a well-planned set of lessons and the students will experience these lessons in an exciting environment. ICT can help students to become independent learners capable of developing critical thinking and problems-solving strategies, collaborative works and inquiry. It allows for information searches, computer modelling, team-work, brain-storming and revision. Teachers can use computers to make learning experiences more effective and to offer students access to a variety of learning tools, expert opinions and alternative viewpoints.

A Nation's qualities depend on one of its citizens, and the education system is the medium for creating ideal citizens. On 15 August 1947, India becomes an independent country. Since then, to date, the government of India laying the education system is the great emphasis from the use of innovations. For the reforming of the education system, the Indian government constructed many education commissions at every step. From the 1970s-decade, education agencies felt information and communication technology (ICT) might show much better results in the field of teaching and learning. The Ministry of Education and Social Welfare felt it the emphasis of Education Technology (ET) for qualitative improvement of education and included the ET Project in its Fifth Five Year Plan in 1971. According to Nation Policy of Education "ET will be employed in the spread of the useful information, the training and the retraining of teachers, to improve quality education, sharpen awareness of art and culture and inculcate abiding values etc., both in the formal and non-formal sectors. Whereas in the revised NPE, 1992 has laid emphasis on the use of educational technology for improving both "quality" and "quantity" of education for the first time in the history of Indian education. When in the field of education, the use of computer and Internet technology came into new forms like data creation, store, and share or transmit, exchange information etc., and then ET converted into ICT. ICT consist of the hardware, software and media for collection, storage, processing, transmission and presentation of information and related services. Few other search engines were also tried to be explored which were not found very effective.

Review of related literature

The research has surveyed the large number of the research studies like; Khan, Parashar & Bansal (2012) who worked on "how are our medical students using the computer and internet? A study from a medical college of north India". The pretested questionnaire administered on 272 MBBS course students at Subharti Medical College, Meerut, Uttar Pradesh. Study based on cross-sectional method. The result revealed that there had 57.4% of the students had some sort of formal training in computer and Internet use. 20% of the respondents used internet for searching the literature for projects from medical journals. 8.0% of the students felt that the internet is totally useless in the medical field. 54.4% of medical students reported the lack of time is main barrier for use of the internet. Paul and Mondal (2012) [21] focused on "integration of ICT in school education: an analytical study in Burdwan district in West Bengal, India". 100 respondents selected from secondary school. The result revealed that had a significant association between ICT and the quality of secondary education. The observed value of 't' was 0.04, lower than the tabulated value of 't' at 5% and 1% level that show no variation regarding the effect of ICT on quality of education in terms of gender. Nagamani and Muthuswamy (2013) carried out the work on "Teacher's professional use of ICT in secondary schools in Tamil Nadu, India". The study was conducted at the Salem, Coimbatore and Madurai districts. A total 157 secondary school teachers were completed and returned the questionnaire. The study revealed that school location and the age variable had a significant influence on the use of computers for managing documents, use for computer accessories and the internet for general purposes, academic purposes. In contrast, gender had no significant influence in the above usage categories. Lalitha and Prasad (2014) research worked on "Factors influencing the usage of ICT in secondary schools: a case study in Telangana, India". A comprehensive survey methodology used self-constructed questionnaire on 200 secondary school teachers from 20 different education board in district Hyderabad. The results show that gender, age group and ownership of management (government-private schools) had no impact on the usage of ICT in secondary schools. CBSE teachers as compared to SSC board teacher's shows significant impact on the usage of ICT. Birwal, K. (2017) [8] A glimpse on the challenges in implementing information and communication technology in school education system in Himachal Pradesh. The study findings the main barriers were lack of financial resources, poor access to the internet, limited trained teachers, and lack of policy for using ICT in teaching-learning process.

Statement of the research problem

The Statement of the research problem is reported as under:
"An analysis of information and communication technology usage of secondary school student"

Objectives of the study

The Objectives formulated for the study were:

1) The research investigated the study of the information and communication technology (ICT) use among secondary school students:

a) The secondary school student's use of ICT.
b) The influence of gender on the secondary school students use of ICT.

Hypotheses of the study

The Hypotheses formulated for the study were:

1) The Access of ICT among Secondary School Students is Low.
2) There is no significant impact of gender on information and communication technology.

Methodology

This study used the exploratory research as a means of finding out the role of ICT among secondary school students. This enabled the researcher to seek new insight, ask questions and assess phenomena in a new light. The use of exploratory research in this study involved the review of relevant literature in the field of ICT in education. Furthermore, the qualitative research method was applied in this research. The qualitative research enabled the researcher to uncover issues in order to generate new ideas. The use of the qualitative approach enabled the researcher achieve an in-depth understanding of the role of ICT in senior secondary school education of selected arena. The methodology of the procedure is reported as under:

- **Sample:** The total 100 Secondary school Students were selected as sample from to two districts of Union territory of Jammu and Kashmir Viz. Shopian and Pulwama.
- **Sampling technique:** The samples were selected by using "Random Sampling Method".
- **Tools Used for The Study:** The instrument used for the study was an investigator-designed questionnaire named ICT Literacy Level Questionnaire (ICTLLQ). It is an eclectic instrument with items drawn from the existing

instrument of Yusuf (2004), Olumorin (2008), and UNESCO's survey instrument for ICT literacy (2010).

- **Delimitations of the study:** The deviations of the study are reported as under:

1) The present study has been delimited to 100 students of 11th and 12th classes.
2) The present study has been delimited to two districts of Union territory of Jammu and Kashmir Viz. Shopian and Pulwama.

- **Analysis and interpretation of the data:** The analysis of the data is reports as under:

Table 1: Showing the ICT usage of secondary school students

Secondary School students		
ICT usage	**Frequency**	**Percentage**
Computer usage	50	25.00
Internet usage	60	30.00
Smart phone usage	70	35.00

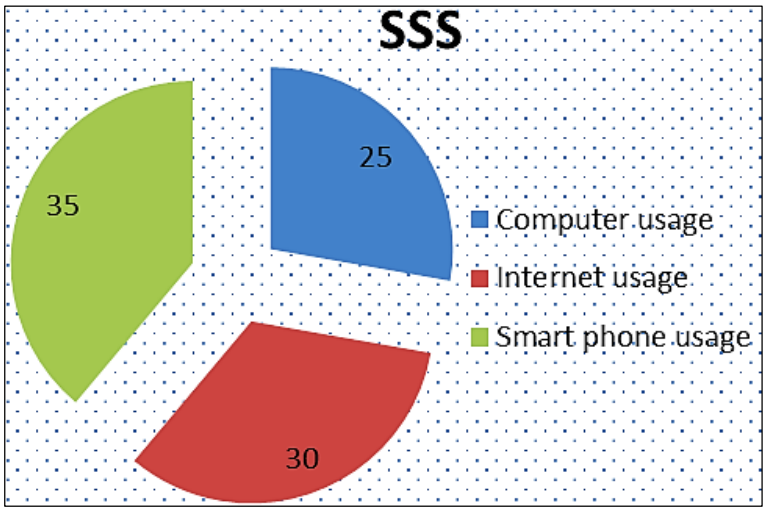

Fig 1: Showing graphical representation on the ICT usage of secondary school students

Discussion

The results reported in the above-mentioned table gives information about frequency and percent wise distribution of students on their level of ICT usage. the results reveal that 25.00 (F=50) students were seen using computers in their educational process. a[part from this it was found that 30.00 (F=50) students were seen using internet in their educational process. In addition to this, 35.00 (F=70) students were seen using smart phone in their educational process.

Table 2: Showing the ICT usage of secondary school students on the basis of their gender

ICT usage	Male students		Female Students	
	Frequency	Percentage	Frequency	Percentage
Computer usage	30	15.00	20	10.00
Internet usage	35	17.50	25	12.50
Smart Phone usage	50.00	25.00	25.00	12.50
Total				

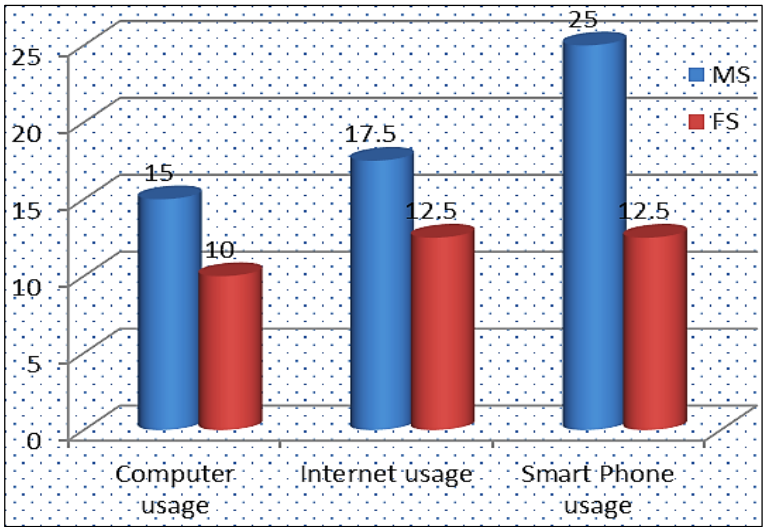

Fig 2: Showing the ICT usage of secondary school students on the basis of their gender

Discussion

The results reported in the above-mentioned table gives information about frequency and percent wise distribution of male and female students on their level of ICT usage. The results reveal that 15.00 (F=30) male students were seen using computers in their educational process. Apart from this it was found that 17.50 (F=35.00) male students were seen using internet in their educational process. In addition to this, 25.00 (F=50) male students were seen using smart phone in their educational process. Coming towards female

students it was seen that 20.00 (F=10) female students were seen using computers in their educational process. Apart from this it was found that 12.50 (F=25.00) female students were seen using internet in their educational process. In addition to this, 12.50 (F=25) female students were seen using smart phone in their educational process.

Table 3: Showing the ICT usage of secondary school students on the basis of their gender

Composite score	Male students		Female Students		't' value
	Mean	SD	Mean	SD	
ICT usage	25.00	3.70	20.00	2.90	3.60@@

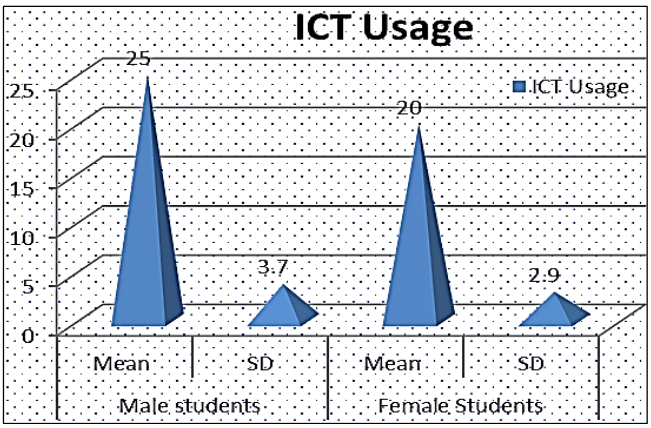

Fig 3: Showing the graphical representation on ICT usage of secondary school students on the basis of their gender

Discussion

The results presented in the above reported table reveal that there seems significant difference between male and female students on their level of ICT usage. The calculated results reveal that the mean value of male students was seen 25.00 which is relatively higher than the mean value of female students (M=20.00). Besides, when the both group of respondents were comparatively analysed, male students were seen with high level of ICT usage as compared to female students.

Conclusion

The study revealed that students hold moderate level of ICT usage. The results of the study reveal that their seems significant difference between male and female students. Male students were seen with high level of ICT users as compared female students.

Conflict of interest: The researcher did no declare any conflict of interest

References

1. Agarwal D, Ahuja S. Attitude of student teachers towards the use of ICT and its impact on their academic achievement. Indian Journal of Applied Research 2013;3(7):186-187.
2. Aggarwal YP. Statistical Methods, Sterling publishers Pvt Ltd, New Delhi 2000.
3. Amin NU. An Effective use of ICT for Education and Learning by Drawing on Worldwide Knowledge, Research and Experience Department of Education, University of Kashmir 2006.
4. Attwell P, Battle J. Home Computers and School Performance. The Information Society 1999;15:1-10.
5. Babu GS, Sridevi K. Role of information and communication technology (ICT) in higher education: a study. International Journal of Multidisciplinary Education and Research 2018;3(3):103-109.
6. Beri N, Sharma L. Teachers' attitude towards integrating ICT in teacher education. International Journal of Innovative Technology and Exploring Engineering 2019;8(8):285-295.
7. Best JW, Khan JV. Research in Education (9th ed.). New Delhi: Pentice Hall of India 2003.
8. Birwal K. Attitude of secondary school teachers towards the use of ICT in teaching learning process. International Journal on Future Revolution in Computer Science & Communication Engineering 2017;3(11):594-597.
9. Biswas RK. A study on status of ICT use in various teacher training institutes of tribal areas. International Journal of Advanced Educational Research 2017;2(6):375-379.
10. Daniels JS. "Foreword" in Information and Communication Technology in Education-A Curriculum for Schools and Programme for Teacher Development. Paris: UNESCO 2002.
11. Debbarma D, Das J. Attitude of teachers towards using ICT in schools: A study in Tripura. Research and Reflections on Education 2019;17(4):1-7.
12. Edumadze JKE. The integration of information and communication technology for teaching and learning at Ghanaian colleges of education: ICT tutors perception. African Journal of Teacher Education 2015, 4(2).
13. Fanai L, Chhangte R. A study of the attitude of the secondary school teachers towards ICT with respect to teaching experience and professional qualification. International Journal of Engineering Science and Computing 2016;6(8):2878-2880.
14. Frederick GR, Schweizer H, Lowe R. After the in-service course: Challenges of technology integration, Computers in the Schools 2006;23:73-84.
15. Frederick GR, Schweizer H, Lowe R. After the in-service course: Challenges of technology integration, Computers in the Schools 2006;23:73-84.
16. Garret HE. Statistics in Psychology of Education. New Delhi: Paragon International Publishers 2005.
17. Goktas Y, Yildirim S, Yildirim Z. Main barriers and possible enablers of ICT integration into pre-service teacher education programs. Journal of Educational Technology and Society 2009;12:193-204.
18. Gupta M, Dharamveer. Prospective teacher's attitude towards the use of ICT: A comparative study between C.C.S. University, Meerut & Kurukshetra University, Kurukshetra. Educational Quest: An International Journal of Education and Applied Social Science 2017;8(1):81-88.
19. Honan E. Barriers to teachers using digital texts in literacy classrooms. Literacy 2008;42:36-43.
20. Hutchison A, Reinking D. Teachers' perceptions of integrating information and communication technologies into literacy instruction: a national survey in the United States, Reading Research Quarterly 2011;46:312-333.
21. Paul and Mondal. Impact of information communication technology on empowering teachers for quality education. GCTE Journal of Research and Extension in Education 2012;11(2):74-76.
22. Kaur M. Role of teachers' attitude and beliefs regarding use of ICT in Indian classrooms. Bioscience

Biotechnology Research Communications 2019;12(3):698- 705.
23. Keengwe J, Onchwari G. Technology and early childhood education: A technology integration professional development model for practicing teachers. Early Childhood Education Journal 2009;37:209-218.
24. Kent N, Facer K. Different worlds? A comparison of young people's home and school ICT use. Journal of Computer Assisted Learning 2004;20:440-455.
25. Koc M. Implications of learning theories for effective technology integration and preserve teacher training: A critical literature review. Journal of Turkish Science Education 2005;2:2-18.
26. Levin T, Wadmany R. Teachers' beliefs and practices in technology-based classrooms: A developmental view, Journal of Research on Technology in Education 2006;39:417-441.
27. Lim CP. Effective integration of ICT in Singapore schools: Pedagogical and policy implications, Education Technology Research Development 2007;55:83-116.
28. Lin MC, Wang PY, Lin IC. Pedagogy technology: A two-dimensional model for teachers' ICT integration, British Journal of Educational Technology 2012;43:97-108.
29. Liu Y, Szabo Z. Teachers' attitudes toward technology integration in schools: A four-year study, Teachers and Teaching: Theory and Practice 2009;15:5-23.
30. Lowther DL, Inan FA, Strahl JD, Ross SM. Does technology integration work when key barriers are removed? Educational Media International 2008;45:195-213.
31. Lu Z, Hou L, Huang X. A research on a student-centered teaching model in an ICT based English audio-video speaking class. International Journal of Education and Development using Information and Communication Technology 2010;6:101-123.
32. Mehra V, Far ZN. Attitude towards information communication and technology use among university teachers of different faculties in relation to computer anxiety. Indian Educational Review 2015;53(1):66-77.
33. UNESCO. Information and Communication Technology: A Curriculum for Schools and Programme for Teacher Development 2002, 35-45.
34. Vijayakumar VSR, Agrawal T. Impact of ICT usage on adjustment of college students. Journal of the Indian Academy of Applied Psychology 2013;39(2):196-204.