CHAPTER-5

FINDINGS, DISCUSSION, IMPLICATIONS AND SUGGESTIONS

CHAPTER-5

FINDINGS, DISCUSSION, IMPLICATIONS AND SUGGESTIONS

5.0.0 INTRODUCTION

The previous chapter has analysed the research data elaborately. In the present chapter, the researcher presented a summary of findings of the study. The findings are discussed in the base of the results found in the present study. The researcher made some recommendations based on the findings of the research which encompass educational implications of the present study. The researcher also gave some suggestions for the future researches and finally concluded the research work.

5.1.0 FINDINGS

1. The science teachers were very interested in using ICT in their classroom teaching.

2. The Arts teachers were very interested in using ICT in their classroom teaching.

3. There is no significant difference between male teachers and female teachers on ICT.

4. There is no significant difference observed across various age groups.

5. There is no significant difference observed by experience.

5.2.0 PERCEPTION OF SCIENCE TEACHERS ON THE INTEGRATION OF ICT IN CLASSROOM TEACHING

The finding of this study is in consonance with the findings of the attitudinal study of Lal (2014) on the ICT user and non-user teachers towards ICT in relation to their school teaching subjects revealed that even the ICT non-user teachers have also positive attitude towards ICT in relation to their school teaching subjects. The study of Sharma and Kumari (2005) conducted on "Status of ICT Education in schools of Bhiwani" revealed a similar finding of this study and it revealed that all the teachers working in schools of Bhiwani had positive attitude towards computer education.

The findings of this present study reveal that almost all the school science teachers who are involved in the survey as a sample of the entire population were of the unanimous opinion of agreeing to the integration of and utilization of ICTs and felt the need utilize those technologies in their classroom or teaching learning process.

5.3.0 PERCEPTION OF ARTS TEACHERS ON THE INTEGRATION OF ICT IN CLASSROOM TEACHING

The finding of this study is in consonance with the findings of Zyad (2016) conducted on "Integrating computers in the classroom: Barriers and teachers' attitudes" which revealed that many teachers have a positive attitude towards ICT, even though those ICTs are still largely underused. Sasseville (2004) brought out that all teachers were interested in effective ways of ICTs implementation in learning process. With regard to the usage of ICT, the study of Mangal and Vallabi (2015) conducted on the impact of technology on teaching strategies of school teachers revealed that, on the whole, the school teachers belonging to CBSE schools, that follow the central government syllabus, are better in their use of technology than the Government schools of the State.

In this present study the findings reveal that almost all the art teacher took part in the survey were positive perception towards the integration and usage of ICT in teaching- learning process.

5.4.0 PERCEPTION OF TEACHERS ON THE INTEGRATION OF ICT IN CLASSROOM TEACHING WITH RESPECT TO THEIR GENDER

Kumar and Basavaraja (2016) investigated the computer access and use in their study they found a notable finding that 93.68 per cent of male and 95.37 per cent of female students were interested in using a computer. Romina (2006) found that male teachers reported significantly higher levels of confidence in using ICT with students for teaching and learning and used ICT more frequently to enhance and transform the curriculum.

The present study pointed out that there was no significant difference in attitude of higher secondary teachers towards integration and utilization of ICT in higher secondary schools in terms of gender. This finding shows that

all the teachers are interested in using ICT and the gender differences have no impact on the use of ICT.

5.5.0 PERCEPTION OF TEACHERS ON THE INTEGRATION OF ICT IN CLASSROOM TEACHING WITH RESPECT TO THEIR AGE

Uniyal and Pandey (2008) conducted a survey on teachers of Uttarakhand and observed that teachers who were above 40 years of age and teachers with 20 years of experience and above showed a favourable attitude towards ICT but used less in the classroom. Manisha (2012) studied the attitude of secondary school teachers towards using of new technologies in Northern Goa with a sample of 150 secondary school teachers working in 45 schools and found out that there was no difference in attitude by gender or experience but significant difference was noticed with respect to age, computer ownership and computer experience of the respondents.

In this present study the researcher found out that there is no significant difference in the perspectives of teacher with respect to their age.

5.6.0 PERCEPTION OF TEACHERS ON THE INTEGRATION OF ICT IN CLASSROOM TEACHING WITH RESPECT TO THEIR EXPERIENCE

Romina (2006) in her study found that there was no significant relationship between years of teaching experiences and teacher confidence but experience did affect the level of ICT use that teacher preferred their students to demonstrate. With teachers who had least experience preferred their students to use ICT more to both enhance and transform the curriculum. Manisha (2012) studied the attitude of secondary school teachers towards using of new technologies in Northern Goa with a sample of 150 secondary school teachers working in 45 schools and found out that there was no difference in attitude by gender or experience but significant difference was noticed with respect to age, computer ownership and computer experience of the respondents.

The present study pointed out that there was no significant difference in attitude of higher secondary teachers towards integration and utilization of ICT in higher secondary schools in terms of their experience. This finding

- There is no significant integration of technology in the arts classroom learning by the arts teacher.
- Gender, age, and year of experience are not a considerable factor for the integration of technology in classroom learning.

5.7.5 Design

The design of the study gives a total picture of research. The design of the present study is descriptive research. Descriptive research collects data that are used to answer a wide range of what, when and how pertaining to a particular population group(researchconnections). It is concerned with conditions or relationships that exist, opinions that are held, processes that are going on, effects that are evident, or tends that are developing. It is primarily concerned with the present, although it often considers past events and influences as they relate to current conditions. Literally, descriptive research means an investigation which focuses on just describing the phenomenon telling, as an outcome of research, what it is. Descriptive research deals with the relationships between variables, the testing of hypothesis, and the development of generalizations, principles or theories that have universal validity.

5.7.6 Population and Sample

The secondary school teacher and secondary school student teachers from the district of Sambalpur, Balasore and Mayurbhanj in the state of Odisha, India taken as the population of the present study. Since it was difficult to include all the secondary school teachers and student teachers in this study; keeping such factors as time, physical and financial constraints, a sample of 40 responses each from in-service and pre-service teacher categories was taken for present study. In-service teachers and pre-service teachers were selected randomly using sampling methods. In the first phase, a list of total number of 20 secondary schools and 4 universities situated in these districts were prepared and out of which 5 secondary schools and 3 universities were selected using the Table of Random Numbers (Fisher and Yates 1963). In the second phase, a list of secondary school teachers working in the selected 5 secondary schools and a list of student teachers studied in the 3 universities in these districts of Odisha was prepared and a sum total of 40 teachers were selected randomly using the Table of Random Numbers.

5.7.7 Tool Used

In order to collect data from the sample tool developed by the researcher with expert consultation. That is

5.7.7.1 The Information Communication Technology Survey Questionnaire of Secondary Teachers

The Information and Communication Technology survey Questionnaire of secondary teachers have been developed to collect information from the prepared list of secondary school teachers and student teachers to know their perception towards the integration of ICT in the teaching-learning process. The questionnaire consisted of 40 multiple choice questions related to the subject matter. The question number 1, 2, 3, 4 and 5 were related to their personal data including their name, age, gender, years of experience and subject/subjects. Rest 35 questions are prepared by the researcher in order to collect their feedbacks, attitudes and uses of ICT and ICT resources in the classroom teaching. Out of these 35 questions, question number 20, 21, 28,29 is specially designed for testing the hypothesis. There are no open-ended questions present in the questionnaire.

5.7.8 Procedure of Data Collection

Data collection is one of the most laborious tasks in a study. A well plan organized by the researcher that helped her to collect the required data in a sequential manner, with the prior permission of head of the institution. The researcher met the selected per-service and in-service teachers in a virtual mode. After giving self-introduction, the researcher explained the purpose of research and encouraged them to be free and frank in giving responses. To win confidence of respondents and to elicit genuine responses from them, the researcher promised to keep their responses confidentially. After completion of responses the researcher collected the filled questionnaires and scores it by using the scoring key for the research tools.

5.7.9 Data Analysis

The researcher collected the data using the above tool and data was analysed by using average and percentage score.

5.8.0 EDUCATIONAL IMPLICATION

The following were derived at as educational implications of the present study:

- One the basis of their findings that the status of ICT utilization in secondary schools would provide useful information in the use of computers to support the future development of the educational system in the districts of Odisha.
- Being aware of the findings of this research-based study would lead to an in-depth knowledge on ICT and that could promote a positive approach and attitude among the teachers on ICT.
- The findings of the present study, if taken up in the right spirit, and be elevated to the implementation stage, then that could lead to the future of the State Government of Odisha.
- On the basis of the present study, it was found that with proper training of usage of ICT and ICT tools teachers can effectively utilise their technical knowledge in the classroom.
- On the basis of the findings, it can be stated that teachers of different stream are very much interested to use ICT tools in their classroom teaching, if adequate facilities and training will provide by the system or institution it be will helpful for the development of the state.
- The findings of the present study indicate that there should be adequate ICT training and resources available in the both rural and urban areas and the training should be provided to each teacher for proper use of the resources to improve the performance of the students without any discrimination.

5.9.0 SUGGESTIONS FOR FUTURE STUDIES

The investigator suggests the following areas for further research in the light of this carried out research work and these topics may be taken up by the future researchers.

- Integration and utilization of ICT in different levels of school education.
- Integration and utilization of ICT in different districts of Odisha.
- Comparison of Integration and utilization of ICT in different levels of schools.

- Comparison of Integration and utilization of ICT in different districts.
- Integration and utilization of ICT in different levels of higher education.
- A comparative study on Integration and utilization of ICT in different levels of higher education.
- A comparative study on the attitude of school teachers and college teachers towards integration and utilization of ICT in their profession.
- A national survey on availability, utilization and skills of ICT among teachers.
- Effectiveness of ICT rich classrooms in promoting academic excellence among late bloomers (the below average students).
- ICT rich classrooms and teaching the gifted students.
- ICT solutions for providing immediate feedback to students for effective teaching learning Process.
- Relationship between educational excellence and ICT.
- Factors influencing integration of ICT in teaching learning process at various districts of Odisha.
- Role of ICT in effective implementation of Right to Education in various districts of Odisha.
- Professional competency and ICT education at higher education level in different districts of Odisha.

5.10.0 CONCLUSION

If there is a field that has born in the recent decades, and has grabbed the status having dominion and control over all walks and works of human living and functioning process at the societal, institutional and individual level, to the extent of becoming an integral component and a feeling of living without that would be an impossibility is nothing but the field of ICT. All the aspiring and promising sectors in this age of global and local collaboration live, thrive and shine as stars and they have wisely absorbed and adopted ICTs in their day-to-day functioning with a futuristic vision to succeed. Educational sector, being a vital and baseline service provider for

the members of the society starting from childhood to the edges of human span of living, cannot have its fruitful and effective service without integration of ICT. Having realized this genuine need, the nations have been in the process of creating awareness of ICT among the teachers at the school and higher education levels and appeals them to maximize the use of ICT technologies in the teaching and learning process, the evaluation process and the managerial process. The governments at the central and state levels have come forward to create the required infrastructure, to equip the schools with needed hardware and software, to provide human resources, to offer operational trainings with a mission of making school education ICT centric for the benefit of learning community of students. Journeying in this effort, sharing the responsibility with commitment and dedication by the teaching community and the student's community, with a positive approach and motivation towards the use of ICT would be of great help in gaining knowledge, acquiring skills and developing right attitude, leading to behavioural change and integrated development of human beings. This ventured research study on "Integration and Utilization of ICT in Higher Secondary Schools" and its findings arrived at based on the data collected and analysed using survey method in Vellore district shows that how far ICT is integrated utilized in the higher secondary schools. The findings of the study, showing the average level of utilization in the higher secondary schools, calls for taking appropriate steps and action plans to enhance the use of ICTs for the betterment of the educational system and its beneficiaries as a whole. Thinking ahead and keeping the steps in tune with the vision of integrating and utilizing ICTs in higher secondary schools would be a genuine and timely contribution for the society. Hence the policy makers, administrators, teachers and students should join together to make this educational task of integrating and maximum utilizing ICT in the higher secondary schools.