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## CHAPTER-V

### SUMMARY AND CONCLUSIONS

#### I INTRODUCTION

We are going towards the twenty-first century. The people of the advanced countries like America, Japan and Russia are using the computers and super computers in every aspects of life. They have shown their mastery in every field, like space research, defence organisation, education, medical and technology of using the computers. India is a developing country. So to match with the development of the advanced countries we should also use the computers in every field.

Computers are increasingly used in education and this is mainly due to the fact it can provide a large data bank of information. The computers can be used to assist in the actual teaching and learning process for all subjects. Computers can make learning fun and also unlike teachers they have infinite patience and always give immediate replies. Computer Assisted Instruction (CAI), Computer Assisted Learning (CAL) and Computer Managed Learning (CML) are three essential methods used for Computer Based Education or Instruction (CBE or CBI). With the help of computer a student can get learning experiences without the help of a teacher at his own speed. Computers can be used for revision of difficult topics, for slow learners, for remedial teaching and narrowing gap between slow and bright learners, model or real life examples and experiments can be done with a computer and for repetition of experiments such as those that can be performed only once in real life.

Until now research in Computer Based Education is confined to school level mostly. In this research it was proposed to study the effects of Computer Aided Instruction at the B.Ed. level in the subject of Psychology which is a part of the B.Ed. Course.

## II THE STUDY

### STATEMENT OF THE PROBLEM :

**"Use of Computer to Teach Educational Psychology  
for B.Ed. Students - A Study."**

### OBJECTIVES OF THE STUDY

This present study was undertaken with the following objectives in view.

- 1) To prepare a computer program for learning and teaching of Educational Psychology at B.Ed. level.
- 2) To investigate whether teaching through computer results in better scoring by student-teachers as compared to regular classroom method.
- 3) To investigate whether learning by students-teachers through computer is more time saving as compared to regular classroom method.

**SIGNIFICANCE OF THIS STUDY :**

i) As far as the knowledge of the investigator gone no study of this kind was undertaken earlier, especially on teaching of Educational Psychology for B.Ed. students.

ii) Educational Psychology being a fundamental and essential knowledge required for teachers it is necessary to teach the B.Ed. students effectively at their own speed.

**HYPOTHESES TESTED :**

The hypotheses of the study were :

- i) Teaching through computer results in better scoring by students as compared to regular classroom method.
- ii) Learning through computer is more time saving as compared to regular classroom method.

**LIMITATIONS OF THE STUDY :**

The study has the following limitations :

1) Only English Medium B.Ed. students were taken for the study from Department of Education, Shivaji University, Kolhapur, Savitribai Phule College of Education for Women, Kolhapur and M.V.P. College of Education for Women, Miraj.

2) The study was limited only to Unit X, "Intelligence and Aptitude of the Paper-II 'Educational Psychology' in the BEd. syllabus of Shivaji University, Kolhapur - 1991-92.

3) The student-teachers belonged to urban area only.

4) A computer program was prepared by the investigator himself for CAI, and no ready-made programme was used.

### III DESIGN OF THE STUDY

#### RESEARCH DESIGN :

Equated group experimental design of research was found to be appropriate for the present study. Pre-test questionnaire and post-test questionnaire were prepared by the investigator on the topic Intelligence and Aptitude in consultation of the subject experts and administered to the subjects of the study. Some short answer type of questions were prepared for the pre-test based on general knowledge of the subjects and forty multiple choice type of questions were prepared for the post-test.

#### SAMPLE AND SUBJECTS :

In all, twenty six English Medium B.Ed. students were selected from three Institutes of Education namely, Department of Education, Shivaji University, Kolhapur, Savitribai Phule College of Education, Kolhapur and S.M.V. Patil College of Education, Miraj. Eighteen of them were from Department of Education, Shivaji University, Kolhapur; three were from Savitribai Phule College and five were from S.M.V. Patil College. All the subjects hailed from urban area only. In terms of sex, the subjects comprised of five males and twenty one females, who were between 20 to 43 years. As only the English medium student-teachers of B.Ed. level were taken up for the study the sample happened to be small.

**DATA GATHERING TOOLS :**

The data was collected by the following tools :

1) Pre-test questionnaire prepared by the investigator with consultation of subject experts for the Experimental Group and Controlled Group.

2) Post-test questionnaire prepared by the investigator with consultation of subject experts for Experimental Group and Controlled Group.

3) The computer programme 'Intelligence and Aptitude' was prepared of the investigator in consultation of the computer experts and subject experts.

**COLLECTION OF DATA :**

The data was collected by using Pre-test questionnaire and Post-test questionnaire prepared by the investigator in consultation with subject experts. Pre-test was administered to all the twentysix B.Ed. students and Post-test for the controlled group was administered to only thirteen students by the investigator. Whereas the data for Experimental Group was collected by using the computer and evaluated by the computer itself. Pre-test data of the Experimental Group and Controlled Group was evaluated by the investigator himself.

**TECHNIQUES USED FOR  
THE ANALYSIS OF DATA :**

Statistical indexes such as mean and standard deviation were computed in pursuance of objectives. Appropriate 't' test was employed to test the hypotheses.

#### IV) FINDINGS OF THE STUDY

i) The 't' test of learning time between Controlled and Experimental Group revealed that there is no significant difference of time between Experimental group students who got experience through computer and controlled group students who got experiences through regular classroom method. In other words, both the students take same time for learning.

ii) The 't' test of Experimental group and Controlled group students' scores revealed that there is no significant difference of scores between the computer student and regular classroom students.

iii) The 't' test of the time taken for answering the tests of Experimental group students and Controlled group students revealed that, there is no significant difference of time taken for testing between computer students and regular classroom method students.

iv) A computer programme can be prepare on text of Educational Psychology.

v) Computer can be used as a tool of teaching and learning.

#### V) DISCUSSION AND INTERPRETATION OF RESULTS

The study revealed that there is no significant difference in respect of test scores, time taken for learning the text and time taken for answering the pre-test and post-test questionnaires in between the experimental group students who got experiences and tested by computer and Controlled group students who got experience through regular classroom method by their own teacher and tested by paper-pencil method. But,

In the case of Experimental Group the human interaction between the teacher and the taught is neglected while in the case of controlled group there is human interaction between the teacher and the taught. But a computer can be used for slow learner who can get experiences according to his/her own speed.

It may be pointed out here that, the findings of the study should be verified on a large sample. As this study was confined only to English Medium students of Shivaji University, Kolhapur, the sample happened to be small in number. A study with a large sample consisting of Marathi Medium students could not be undertaken due to the restriction of time and resources.

It may be further pointed out that, in this study, students' attitude towards computer and opinion about the use of this medium (computer) has not been studied, this calls for further investigation since, opinion and attitude effects attention, concentration etc. while learning through the electronic medium, the computer.

## VI EDUCATIONAL IMPLICATIONS

Every one does not need to learn programming, yet every body in education must learn about computers. Computer in education is no more equated with learning of programming language. The developments in the field enable every one to use computer and enhance their efficiency and effectiveness. (Deodhar, P.S., 1992)



In the field of education, computer can be used for :

- 1) i) Revision of difficult topics.
- ii) for slow learners,
- iii) for remedial teaching and narrowing gap between slow and bright learners,
- iv) for model or real life examples and experiments can done with a computer,
- iv) for repetition of experiments such as these, that can be performed only once in real life.

2) Computers are used in a wide variety of modern system which require different levels of training and specialisations, therefore, educational qualifications for each level must be specified.

3) As far as computer education at different levels is concerned, it may be divided into computer education in schools, and for various degree programmes in Colleges and Universities.

4) All children must be given computer education and teachers must be given incentives to train themselves in this area by being given increments and at last six months training with salary. (Kulendaiswamy, 1992, Vice-Chancellor of Indira Gandhi Open University)

5) Computer education should be introduced from 5th standard. Conceptual framework from 1st to 8th standards. 80% time should be devoted to learning with computers and 20% about computers. Before 8th standard instruction should be non-verbal. In the 9th and 10th standards 50% time for learning about computers. Between 10th and 12th standards it should be offered as an effective subject. (Vittal, N. 1992, Secretary, Department of Electronics )

6) There should be training courses for teachers who are not proficient in computers.

7) Computer education should be offered in rural sector. Computer is one of the major instruments for monitoring information. Computer education has a tremendous effect on the development of thinking - algorithmic thinking. Indian development cannot be isolated from development of rural children. (Mukhopadhyay, M., 1990 in Educational Technology, Aug., 1990)

"Without extending the use of computers in the rural sector, Indian development cannot be ensured." (Sen, 1990 in Educational Technology)

## VII SUGGESTIONS FOR FURTHER RESEARCH

Following are some of the suggestions for further research :

- i) The study be repeated involving large number of sample in the form of a research project.
- ii) The study be repeated taking comparison with regional language (Marathi Medium) students.
- iii) A study of students' attitudes towards computer, emotions while learning with computer should be undertaken.
- iv) A study of sexual difference and while learning through computer should be undertaken.
- v) A study of rural and urban students should be undertaken in respect of computer education.
- vi) A study of computer education and availability of resources in the concerned area should be undertaken.