PART - THREE

CHAPTER - V

CONCLUSIONS AND SUGGESTIONS
Some major findings of the present study are:

The content of B.Ed. course/syllabus of population education was analysed on scanned keeping two points in view.

(a) the quantum of knowledge which is given; and

(b) the methodology which is to be used to impart that knowledge effectively.

The developed video programme has been formed to be an effective tool of instruction which is dependable for teaching purposes.

The trainees in general preferred and favoured the introduction of population education and liked its teaching through the use of the new method of teaching by means of a video programme rather than the stereotyped and hacknlyed tarly and traditional lecture method.

There are found significant differences between the population education achievement of B.Ed. trainees who used the video programme for population education curriculum topic of B.Ed. syllabus compared to the
trainees taught through lecture method. However their mean score are quite high and consistent on all the units of achievement test. This reflects that the achievement is more after video programme in comparision lecture method. Achievement is increase by the lecture method but in case of video programme achievement is quite high. The results of the study further indicate that video programme is effective to develop the achievement of B.Ed. trainees for the teaching of population education.

There is significant differences on the birth control factor of PPQ. It indicates that video programme is more powerful to develop the attitude towards birth control.

The factor of PPQ mean difference on population management is significant. Difference is quite high. It may be said that video programme is strong to develop the attitude towards population management.

The sampled group have more favourable attitude towards abortion to teach video programme in comparision traditional method. They have significantly difference on the factor of abortion. It may be inferred that because the video programme is more effective then lecture method.

There is a significant difference on the factor family planning. This indicates that on the factor of
family planning video programme is superior to develop the attitude towards family planning.

The last factor of PPQ namely modernity it has also significantly difference at both level. It makes clear that video programme method is more effective to change the attitude towards modernity.

The sampled experimental group has the highest mean score on population management and has the lowest on abortion.

The sampled control group has the highest mean score on family planning and has the lowest on birth control.

There are significant difference on the scale of small family norm. The reason is that the video programme is powerful media to change the attitude towards population education and related issues.

There are significant difference in control group and experimental group data on population education norm.

Evidently, the developed video programme is hence an effective device for teaching population and making its learning effective, efficient and efficacious.

There is no significant differences in the pre-test and post-test mean differences achievement for the experimental and the control group. Applying 't' test
it has been seen that each unit of achievement test have mean differences of the experimental group on post-test is highly significant at the level of 0.01 and 0.05 level. Thus it can be said that null hypothesis stands rejected at 0.1 and 0.01 level of significance.

The descriptive analysis of the findings has clearly indicated that each factor of PPQ namely, birth control, population management, abortion, family planning and modernity have mean differences of the experimental and control group on post-test is highly significant even beyond the 0.01 and 0.05 level of significance. Thus it can be said that the null hypothesis stands rejected at 0.01 and 0.05 level of significance.

There is significant differences in the mean difference in attitude towards small family norm for the experimental and control group. The obtained value of 't' for the experimental group is grater then the require values of significance at 0.01 level and 0.05 level of significance. Thus it can be said that the null hypothesis is rejected.

The obtained value of 't' is grater than the table value of 't' at the significance level of 0.05 and 0.01 on the population education norm. Thus it can be said that the null hypothesis is rejected.
The results clearly indicate that video programme is more effective for B.Ed. trainees offering population education.

LIMITATIONS OF THE STUDY

(1) As the sample was some what small and did not have adequate male female representation it has not been divided into groups and sexwise study was abandoned.

(2) Due to paucity of time and resources, only five constant units of population education have been included. The study has been hence, restricted to evolve an innovative method (video programme) of teaching these five selected units of the prescribed syllabus.

(3) The design of the study is quasi-experimental and hence, high statistical sophistication has been avoided. The group differences have been studied through comparision of mean scores and the significantly mean differences has been studied through the application of 't' test alone.

(4) Likewise, some contaminating factors such as timegap, intelligence level, and home environment and the like could not be made constant or controlled.

(5) The 'effectiveness' of the developed video programme has been measured and assessed in terms of change
in achievement scores and attitude scores. The cost effectiveness of the video programme could not be calculated and analysed. The economic aspect of software production is an overriding factor and requires a proper scamination. The cost effectiveness can only be measured in relation to soals of instruction achieved. Goal achievement. Likewise, can not be measured in terms of the number of content units covered. The test of cost-effectiveness can only be in terms of the extent to which the software is used by teachers and it is effective in promoting learning on the part of students. Long-term follow up investigations are needed for the determination of cost-effectiveness of the developed video programme.

(6) The use of video-programme in teaching and its attendant philosophy of individualized learning, it was thought, is irresistible and shall 'after the culture of the school' but it did not happen and may not occur. Teachers and learners are often attracted by new judgests, electronic, electric and others for a while and they do have some soft of temporary 'cosmetic effect' in achievement and performance. Hence the results of positive change in achievement and the findings of increase in favourableness of attitude towards small family norm and population education may be interpreted with
the proverbial pinch of salt. There is an evident need to conduct at regular intervals systematic and controlled studies to identify and isolate the variables and factors that contaminate and influence the results in the positive or negative direction.

(7) The task of developing a programme and testing its effectiveness is an arduous one. It requires time, money, effort and resources. The researcher had a variety of personal limitations and had to suffer some salient constraints due to her role as a housewife and daughter-in-law at home beside being a researcher and an ad-hoc lecturer in the college/department. This peculiar situation may have created some difficulties in performing the task as well as it was planned. May be, that's why some cobwebs remained uncleaned and some steps had to be skipped for timely and satisfactory completion of the study in hand. The study, however has maintained a dignified bearing and has adhered to the sound and scientific procedure strictly and seriously.

CONCLUSIONS:

A number of interesting and worthwhile findings have resulted from this study. They have been treated in detail in Chapter IV of the report, but it appears proper to enumerate briefly here such of them as can lead to some prominent conclusions.
- Trainees have a positive and favourable attitude towards population problem and in favour of population education.

- Trainees whose major interests were in the quality of life beliefs.

- Trainees in general are against abortion, they believe that abortion has no moral justification.

- The majority of trainees felt that the rate of population growth of the nation was too fast. It is the serious problems for the nation related to social and economic development.

- The trainees to a more significantly positive change in attitude after the video programme.

- Both lecture method and video programme were effective but video programme showed a significantly superior gain than the lecture.

- The control group did not show any significant information gain.

- The video programme method produced a significant information towards attitude, and achievement on the population education and its related issues.

This proves that both the teaching methods are effective but superiority of the video programme method
over the lecture method in teaching population education at B.Ed. trainees.

USEFULNESS AND IMPLICATIONS OF THE STUDY

The role of the teacher educator in imparting instruction and disseminating information is definitely more complex today than it used to be a generation also. With demands made on him from all quarters challenged by problems which often transcend his function/profession, called upon to take sides in ideological or political quarrels, pressurised to provide immediate solutions to age-old problems and finally puzzled by the increasingly frequent inversion into his thinking by normative considerations, the educator is often tempted to seek refuge or rather return to his personal work or private tuitions. Such a temptation does not last very long.

The educational research/teacher is of this worked and is perfectly were aware of his functions and duties vis-a-vis the country and world and social realities.

That's taking load from the research findings of educational investigations of the present study she develops insight and imagination to strong then his teaching and generate, stimulation and motivation to make instruction in subjects like population education and environmental studies effective and efficient.
Very few researcher are available which have direct implications for developing curriculum in population education, improving teaching methodology of population education or for effective implementation and evaluation of such a programme. The year 1984 was celebrated as international population year throughout the world. The world population year seems to have given impetus to many universities, teacher training colleges and institutes of higher learning to establish population centres and to initiate research in the field of population education. Population education enables the students to understand that family size can facilitate the development of a higher quality of life in the nation. Further on they can understand that small family size can contribute materially to the quality of living of the individual and his family. All individuals have a right to adequate information about the effect of changes in family size and in national population on the individual, the family and the nation such a knowledge can be utilized to restrict the family size and to reduce the national population to a desired retent.

If population education is included in the syllabli and courses of study at the school level, the future citizens will learn about the need and importance of population control measures. Furthermore they will be mentally ready to appreciate the intricacies of problems of not only controlling population growth but also identi-
fying factors that influence and determine fertility regulating behaviour of young men and women.

The advent of science and technology and increase of electronic goods, specially the invention of microcomputer and word processor has revolutionised the educational world. Software produced for education can also be distributed by a variety of delivery systems to a lot of learner studying in their local places. Special radio and television broadcast programmes are immediately and simultaneously delivered to learner all over the country when coverage is wide and database storing a large amount of information is also utilized by everyone nationwide when communication network is diffused. Indirect education, learners should study independently at home or at working places. They need higher level of study skills for independent study. For example, they must design study plans by themselves, conduct self-study and self-education. These are essentially activities of tutors in study centres. In independent study, learners must play tutors' roles as well as learners roles.

For example, cost of educational software family condition for independent study, condition of physically handicapped and level of illiteracy are important aspects for selecting suitable software. Tutors in study centres also must consider these conditions in learners for receiving responses and giving KRS to learners.
It seems that the main problems in hardware and software in education in developing countries are:
(a) Shortage of hardware and software production;
(b) Difficulty in hardware and software delivery; and
(c) Insufficient experiences on hardware and software use in education.

Though some agencies produce hardware and software, most of them are not enough for producing higher level of technological products. In some cases delivery system is now expending some wide but in many developing countries delivery of educational software is insufficient especially in rural areas. Tutors and learners in study centres and individual learners at home are not well provided with a variety of hardware and software in rural areas.

The activities in the study centres and educational institutions should be supported by the regional centres for educational technology. Regional centres should have large libraries and database for educational software from printed materials to CAI courseware and sometimes produce their own educational software.

The administrators may plan the standard course of study and standard evaluation items, plan and implement standard teacher training curriculum, construct budget plan and legislate related acts for promoting educational use of media and technologies in education. Moreover
the central organisation should have a large scale of libraries and database for educational software.

The teaching of population education exacts subjects competence and mastery of skills from the teachers in the use of non-traditional teaching methodologies. Population is a value laden subject. Because the subject matter is controversial, ethics, demands a free choice, meaning the teacher must help the students make responsible decisions arrived at from a rational study of alternatives, of advantages and disadvantages of a given issue. The teacher can not simply hand down ready-made insurers to the students. The students must be given the opportunity to explore their own feelings, thinking and value structure on all the possible aspects of the phenomenon and discuss alternative issues. This process will enable students to make responsive decisions regarding their population related behaviour now and in the future.

In the ideal teaching situation, the students are given the opportunity to study various alternatives and the pros and cons of an issues on which they rationally base their answers. Positive educational effort is necessary to promote the individual's fulfilment both in personal living and in his family and social relationships.
IMPLICATIONS FOR EDUCATION

The teaching functions of the teacher should not be isolated in the classroom but mutually and closely interrelated. For example, while teachers are giving explanation to the learners, they observe their gestures and expressions. Teachers ask questions to individual learners while explaining and giving their opinion.

In the classroom, various teaching functions of the teacher are naturally conducted but it does not mean that they are always balanced. The presentation of teaching materials such as commenting, explaining and demonstrating is more important in the direct type of teaching subject matters. On the contrary, in the non-direct type of teaching subject matters, there is more weight placed on the KR to learners and arousal of response, such as confirming, rejecting, summarizing, receiving, gesturing and pausing. In motorskill training, there is more weight placed on response control such as indicating, instructing and guiding. Therefore, in using various teaching devices, these points must be considered to promote efficiency in education. The non-projective teaching tools and projective teaching equipment are functions of material presentation. Broadcasting equipment are functions both of material presentation and response control.

In the use of such media as video programme
requires care and caution. The use of video in education especially expands the function of material presentation and the control of responses in the classroom, but it lacks very important teaching functions such as KR and evaluation. Therefore, it is important to fill in these missing functions. In order that the teacher may makeup for these functions, it is effective to make the learners discuss the subjects to give them supplementary content, to let them write a report and so on. For those learners, listening to educational broodcasts or seeing the video programmes classrooms, it is necessary to provide them with an intensive schooling course for a definite period.

Video education is conducted both in formal and non-formal settings. In formal education, primary and secondary schools can undertake video education either in classroom teaching situation or direct small group teaching situation. For example, school children often study by radio and ETV in their classroom instruction and students of training institutions also study educational materials developed by educators in the school could course at home.

In non-formal setting both school children and adults study subject matters such as population and pollution by broadcast programmes or video teaching materials at home or at working places. For example, young children watch ETV programmes at home or adults study
by correspondence text-book at working places.

Video tap cassette recorder can record, keep and playback auditory or audiovisual information. We can gain information at any time we like and for any duration we like, and report as many by ourselves, audio and video tape recorder would be useful and convenient for distance education. Workers and busy students can study their subjects at their own place and at their convenience, if the suitable education software is reached by transportation.

Teachers can produce integrated video software and use them in their classroom both in group and individual teaching.

Concerning the content suitable for video software almost all kinds of information such as resource materials, description, instruction, poem reading, drama, acts, music, picture and so on can be recorded and utilized. Now-a-days as the cost of machines is getting training colleges and secondary schools reasonable of India have audio cassette tape recorder.

Almost all middle class families have access to audio cassettes increasingly cassette video recorders does becoming popular. Almost all popular taining colleges have colour VCR, T.V. and the universities have AVRCS or EMRCS or a workable and manageable educational
resources. Centres which have necessary equipment and where alithal for production of audio and video cassettes for instructional purposes.

The newly developed video-programme can be used as a satisfactory supplementary tape of instruction along with other teaching and instructional media. The selection of a reliable and valid media mix for instruction is a justifiable demand and an urgent requirement for making teaching effective and efficient, imaginative and innovative. Fig. IX presents at a glance the factors that may be taken into account and may be kept in view while selecting a valid media mix. The considerations availability, accessibility, acceptability and economics of the medium on the one hand may be taken into account. Furthermore, such a decision should be guided by the course objectives, subject-matter, instructional strategies and assessment demands of the subject and content-area on the other simultaneous with this, the educator/teacher should consider and keep in mind the environmental context and the institutional characteristics on one side whereas the learning context, with student characteristics may be ascertained on the other side.

SUGGESTIONS FOR FURTHER RESEARCH

The scientific knowledge and progress has to be transmitted to future where is in the form of a syste-
FIG. IX: CRITERIA FOR THE SELECTION OF A VALID MEDIA MIX
AT THE LEVEL OF A COURSE OF STUDY

Availability

Environmental Context

Institutional Characteristics

Economics

Acceptability

Selection of Valid Media Mix

Course Objectives

Assessment Demands

Learning Context

Subject Matter

Student Characteristics

Instructional Strategies
matised body of knowledge, hence there is need to attach importance to the development of training, the quality of teachers and educational institutions, and the dynamism of national and state scientific associations and academic bodies. The present study has answered some questions about the effective instruction in population education. Simultaneous with this, it has raised a variety of queries about the need and direction of future research in population education and related issues. Some of the topics/areas in which investigations/studies can be conducted are serialised here.

The present investigation is a pioneering venture in the area of instructional product development. Its contribution is highly landable as the newly developed video-programme is a useful device for strengthening teaching of population education is the college of education. However this research endeavour raises some new questions which need deep probe for finding satisfactory answers. Hence

1. Studies to find out how certain personal variables such as teacher's age, experience and professional training, affect pupils learning in population education.

2. Development of tools and techniques for evaluating student achievement in population education.
3. Cost-benefit analysis to evaluate the impact of population education in terms of the expected outcomes or instruction.

4. Development of tools and techniques for evaluating pupils knowledge, attitude and behaviour at different grade levels.

5. Development of tools and techniques for programme evaluation at different levels and various stages.

6. Evaluation of different strategies for implementing the population education programme.

7. Studies on curriculum development based on training needs and emergent concerns.

8. Comparative study of the effectiveness of different teaching and training methods.


10. Relative effectiveness of teaching population education as as separate subject and as integrated with other subjects.

11. Relative effectiveness of teaching population education through formal and informal methods.

12. Relative effectiveness of teaching population education through co-curricular activities or extension approach.
13. Relative effectiveness of teaching population education through different instructional media for different target groups.