

## CHAPTER V

SUMMARY, FINDINGS AND CONCLUSIONIntroduction

In ancient India, the intelligent senior scholars guided the other junior scholars under the general supervision of their teachers. This system was called 'monitorial system'. It afforded opportunities to intelligent students to learn the art of teaching and thus indirectly performed the same function which the "Teachers' Training Colleges" discharge today. This system was in practice during the Muslim Period as well when a licence of teaching was given by the teacher called 'Ijaza Amma' to his student permitting him to take up teaching. Later, in the British Period the formal system of preparing teachers emerged. This preparation came to be known as 'Normal Training'. In the beginning, it was meant for primary teachers but later on, it also included the secondary teachers. It is this system which is prevalent today.

Yet, for the university teachers no training programme was thought of till 1960. The Education Commission (1964-66) in its report recommended some kind of orientation programme in pedagogy for the university teachers.

Presently some universities have taken initiation to sponsor the training programme for university teachers as pre-service as well inservice programme.

Pre-service Programme: The Annamalai and Calicut universities have been conducting pre-service programme since 1977 and 1975 respectively. The Annamalai University is awarding 'Master of Higher Education' (M.H.Ed.) degree and Calicut University is awarding 'Master of College Teaching' (M.C.T.) degree. This course is of one year duration in both the universities. The clients are fresh students, who have obtained their post-graduate degrees and are well qualified for university lecturership. These two universities have theory papers as well as practice teaching. Supervision of candidates during practice teaching is being done by the staff members themselves. In Calicut University students have to write a research paper in the form of a dissertation on their respective fields of specialization at the M.A./M.Sc./M.Com. degree with the help of their respective departments. The evaluation of the dissertations is done by the respective departments to which the students belonged to their first post-graduate degrees. The theory papers are: (i) Philosophical and Sociological Bases of Education, (ii) Educational Psychology, (iii) Development and Problems of Higher Education in India in a Comparative

Perspective, (iv) Curriculum Teaching and Evaluation in Higher Education, and (v) Methodology of Teaching the Subject of Specialization. The practical aspects are based on the preparation of instructional material and testing <sup>items</sup> and current developments in the subject of specialization.

In-service Programme: Some other universities have been conducting inservice programmes in India. The Madras University awards to the participants 'Diploma in Higher Education' (D.H.Ed.) after completion of one semester course on methods of teaching and evaluation in higher education. The participants of this course are the lecturers who are already working in the university/ college departments. This university has also started a few Centres in the affiliated colleges for conducting such courses.

The Madurai University since 1976, has also been conducting regular courses for university/college lecturers and awards certificates to the participants. The Madurai University is having its own course.

Since 1975, the M.S.University of Baroda has made it compulsory for the newly appointed lecturers to undergo such a training. During probation period, they have to attend this course in the Faculty of Education and Psychology of the University. Recently, the university authorities have decided to divide the course in three phases: (i) 40 percent of the course covered by the Faculty of Education and Psychology, (ii) 40 percent of the course covered by the respective departments of the participants, and (iii) 20 percent covered by

the Faculty to which the participant belongs. The Faculty of Education and Psychology has formulated its own course which consists of mainly skills in the methods of teaching, evaluation techniques such as grading system etc. problems of higher education, philosophical and sociological bases of higher education, modern trends and some practical aspects of higher education.

Though the trend is new to India the pedagogy courses for teachers of higher education have been prevalent in foreign countries like U.K., U.S.A., U.S.S.R. and Australia since long. The U.S.A. and U.K. have been conducting the inservice programmes. Similarly, Australia 'Mini-courses' for university teachers are being conducted by Macquarie University. The U.S.S.R. also provides for pedagogical training to its university teachers. Most of these programmes are on a voluntary basis.

#### Rationale for the Present Study

A few universities have already started the pedagogy courses for university teachers. There are many issues related to the programme. There is no uniformity among all the courses conducted by the various agencies, with regard to the course content duration and the types of the programmes. There<sup>are</sup> also issues like:

- (i) Who should organize the courses? Whether the concerned department to which the untrained teacher belongs to; or the department of education in the universities?

(ii) How to overcome the resistance towards such orientation courses?

(iii) Should it be on a voluntary or compulsory basis?

All these questions are important and, therefore, require an indepth study. Hence, the investigator has felt the need to study the problem of pre-service and in-service orientation programme, as they are being conducted in different universities of India.

#### Statement of the Problem

On the basis of the foregoing discussions the problem has been stated as;

'A Critical Study of the Programmes of the Pre-service and In-service Education of Teachers of Higher Education in India'.

#### A Few Definitions

Critical: 'Critical' means careful judgement. Here the term is with regards to the programmes; whether these programmes are needed or not and what is the present position of the programmes; these are being, carefully, judged in this study.

Pre-service Programme: The term 'pre-service' programme means the preparation of an individual for his job before getting appointment to the same.

In-service Programme: The concept of an in-service programme is to prepare a teacher for his proficiency in his occupation during the service period.

Education of Teacher: In this study, 'education of teacher' is used for the training or orientation of the teachers in accordance with the new concept of educational philosophy and modern pedagogy.

Higher Education: Higher Education can be defined as 'all types of education given in institutions such as universities, university colleges, liberal arts colleges, technical institutions and teacher training establishments, for which basic entrance age is about eighteen years and the course leads to the awarding of a degree.'

Orientation Programme: The term 'orientation programme' has been used to mean the training of university teachers in methodology of teaching.

### Objectives of the Study

1. To study the need of pre-service and in-service education programmes as felt by the university teachers.

2. To study the objectives of the pre-service and in-service education programmes as they are being conducted by various institutions.
3. To study the pre-service and in-service programmes in terms of their :
  - (a) types, (b) duration, (c) syllabus and
  - (d) methods of teaching.
4. To seek the opinions of the participants
  - (a) regarding the evaluation of their performance in the programme, and
  - (b) the usefulness of the programme.
5. To study the attitude of the teachers of universities towards the pre-service and in-service education programmes.
6. To develop a syllabus for training of teachers of higher education.

#### Delimitation of the Study

1. The study is delimited to the departments of education of the university/colleges which conduct pre-service and in-service programmes for college/university teachers.
2. It also comprises of those pre-service and in-service programmes which are meant for college/university teachers to improve their classroom competence in teaching and evaluation.

3. It does not include the orientation courses run by other types of institutions like technical training institutions agricultural universities.

#### Methodology and Procedure

The design of the study covered the following headings :

- (i) The sample.
- (ii) Tools and Techniques.
- (iii) Data Collection.
- (iv) Statistical Analysis.

#### The Sample

The sample of the present study of all the groups (pre-service, in-service and untrained group) consisted of 512 university teachers or prospective teachers, who had undergone pre-service courses of university/college level. The sample consisted of 82 respondents of pre-service education programmes only from two universities i.e. Annamalai and Calicut universities. The sample of the in-service education programme consisted of 240 respondents from the M.S.University of Baroda, Madras University, Madurai University and some summer/short institutes conducted by a few universities financed by UGC. Moreover, the sample also consisted of 190 respondents from the above mentioned universities, which had not undergone such orientation programme.

The 65 experts, who are concerned with these programmes or those who teach the M.Ed. class, were selected for giving their opinion about the syllabus for a training programme.

The deans, heads, conveners and the directors of the summer/short institutes were interviewed.

Two separate groups of inservice programme on two occasions were administered an attitude scale to know the change in their attitude towards the programme by a pre-test and post-test.

#### The Tools and Techniques

The selection of tools for a particular study depends upon various considerations, such as the objectives of the study, the amount of time at the disposal of the investigator, availability of the suitable tools and the personal competence of the investigator to administer them.

1. On the basis of these criteria, one questionnaire was prepared by the investigator himself to measure different aspects of the programmes. The aspects are:  
(i) Need of the programme, (ii) Objectives of the programme, (iii) Opinions about evaluation, types of the programme methods of teaching, duration, syllabus etc. and suggestions for improving the programme.

2. An attitude scale was also prepared by the investigator to know the attitude of the university teachers towards the orientation programme.

The reliability and the validity of the tools were established on the basis of experts' opinion. The reliability of the attitude scale was also established by employing the split-half method on a group of participants, who attended an orientation programme conducted by the Faculty of Education & Psychology of M.S.University of Baroda.

3. Another questionnaire was prepared by the investigator to know the opinion of experts on the proposed syllabus including the theory and practical aspects of the programme.
4. A semi-structured interview schedule was prepared by the investigator to know the reactions of the experts and administrators about the different aspects of the programmes.

#### Data Collection

The investigator collected the data by personally visiting the different institutions under survey viz., M.S. University of Baroda, Madras University, Madurai University, Calicut University, Annamalai University, Meerut University and Ramkrishna Mission Vidyalaya, Coimbatore. The data from the rest of the sample was collected through mail.

### Statistical Analysis & Interpretation of the Data

The data, thus collected by questionnaire and attitude scale was divided into three categories: (i) preservice education programme, (ii) inservice education programme, and (iii) untrained group. The questionnaire was analysed question-wise and the attitude scale was rated on a five point scale.

The 't' technique was used to find out the significant difference between the two groups with respect to different variables. The frequencies were converted into percentages, which were rounded to make figures thereby avoiding fractions.

In a few places coefficient of correlation ( $\rho$ ) by rank difference method was calculated.

A few questions have been descriptively analysed.

### Major Findings

The findings of this study are being presented according to the objectives formulated in the foregoing pages.

### The Need of the Programme

In this context, it is essential to be aware of the opinions of the University teachers. Here under are discussed findings regarding the university teachers' opinions.

1. Both the pre-service (100%) and Inservice (76%) groups feel that this programme is helpful to them.

2. The untrained group (80%) also feels that this programme may be helpful to the university/college teachers.
3. The trained respondents stated that various aspects of the programme helpful to them in their teaching learning process, are :
  - (i) techniques of teaching,
  - (ii) skills leading to effective teaching,
  - (iii) skills making teaching systematic,
  - (iv) skills of understanding the behaviour of the students,
  - (v) developing confidence in teaching,
  - (vi) better knowledge of motivational factors,
  - (vii) knowledge of educational psychology
  - (viii) techniques of evaluation.
4. The untrained group also indicates the above mentioned opinions, but with less emphasis.
5. The input of this programme has changed the attitude of the teachers significantly at .01 level making it more favourable than the previous one. It indicates that there is a great need of such orientation programmes for developing a favourable attitude towards orientation as a concept.

6. The teachers of the P.Group (M=146.23) and I.Group (M=140.24) have more favourable attitude than the Untrained Group (M=115.32). This is the effect of the input of the training programmes. It shows the significance of the programme.

#### The Aims & Purposes of the Programme

The following objectives of the course were formulated and listed according to the hierarchy of the ranks.

- (i) Systematic and effective teaching,
- (ii) Awareness of new techniques of evaluation,
- (iii) Adopting suitable and new techniques of evaluation,
- (iv) Proper guidance to the students in teaching-learning process.
- (v) Identification of problems of higher education and their remedies,
- (vi) Curriculum development in higher education,
- (vii) Knowledge of motivational factors which motivate students to achieve excellence,
- (viii) Self confidence in teaching,
- (ix) Understanding the conditions under which learning takes place,
- (x) Establishment of rapport with students.

It is found that there is no significant difference of opinion about the aims of the programme between the P.Group and I.Group.

There is significant difference of opinion about objectives between (P.Group and U.Group) and (I.Group and U.Group) at .01 level.

#### Types of the Programme

1. The participants, who have completed the pre-service programme show preference towards the pre-service programme (89%).
2. The participants who have completed the in-service programme are in favour of in-service programme (68%).

#### Duration of the Programme

1. The respondents recommend that pre-service programme be conducted as a full time course for one academic year.
2. The respondents recommend that the in-service programme be conducted as evening courses for one full semester, wherein the practice teaching may be continued in their respective departments.
3. They also suggest the in-service programme be provided during the probationary period of the newly appointed teachers, in order to enable them to improve their teaching methods and other evaluation skills from the very beginning.
4. The respondents recommend that the inservice programme should be provided to each teacher after every 5 years.

Syllabus

Each orientation course has its own syllabus. The present syllabus has broadly been acceptable to both the groups (P & I). However, emphasis on different items differ. The following are the opinions of the participants regarding these syllabuses of the different orientation courses.

1. The first preference has been given to 'discussion method' according to its usefulness.
2. The 'psychological treatment of students' is also found to be useful to the teachers.
3. Being the era of technology and science, the respondents prefer audio-visual aids like T.V., film etc. for making teaching effective.
4. In some universities the semester system has been introduced, wherein internal assessment is a dominating feature. This method of evaluation is also preferred in place of the traditional system.
5. The effectiveness of classroom teaching depends upon the classroom climate. In the classroom situation, there is a interaction between teacher and taught, taught and taught, teacher and content, and content and taught. If the climate is more open, then teaching will be more effective. This aspect has also been accepted.
6. Participation and observation technique in classroom teaching have been highly appreciated by both the groups (P & I).

7. 'Discussion Method' is also preferred from its practical point of view.
8. The pre-service group and in-service group rated equally on the different ranks to all the aspects of the syllabus.

#### Methods of Teaching

Regarding the different approaches or techniques used by the consultants or resource persons, the following are the opinions of the participants.

1. The 'lecture followed by discussion' is found to be more effective among all the approaches used by the resource persons.
2. The 'multi-media' approach is rated at second rank by the P.Group and I.Group.
3. 'Lecture Method' is less effective in comparison to the above two approaches.
4. The rating of both the groups (P & I Groups) to methods of teaching is the nearly same.

#### Knowledge of Evaluation Techniques

1. All the three groups indicate a sense of dissatisfaction with the existing system of examination in universities/colleges.
2. The three groups agree that there is a need to orient the teachers regarding evaluation techniques to be followed in their institutions.

3. They are not clear about the idea of the influence of examination on teaching process.
4. The three groups agree that there are remedial measures to improve the present evaluation system.
5. They also suggest the remedial measures to improve the examination such as,
  - (i) by introducing continuous assessment,
  - (ii) by internal evaluation,
  - (iii) by introducing grade system,
  - (iv) by introducing objective type of questions.
6. They rate 'continuous assessment methods of evaluation' as their first preference.
7. The internal assessment is also found to be useful to the participants, in evaluation.
8. The (  $\rho = .94$  and  $\rho = 1.00$  ) correlation between P, I and U Groups are found to be significant among all the three groups. It indicates that the remedial measures are rated at equal ranks by all the three groups.
9. The derivation is that these different techniques may form a part of the Orientation Course.

#### Evaluation of the Participants

The P.Group (93%) and I.Group (83%) are in favour of an evaluation of the participants at the end of the orientation programme.

Both the trained groups (P & I) are in favour of evaluation of the day-to-day participation in the various activities of the programme.

The preservice group favours of the internal evaluation system greatly. The P & I groups feel that both internal and external evaluation should be adopted for the evaluation of the participants.

That the evaluation be compulsory is self evident from the fact that the P.Group is being awarded with the degree of M.C.T. and M.H.Ed.

The inservice group is awarded diploma/certificate, therefore, it is evident that evaluation of the participants in the orientation programme, is necessary at the end of the orientation programme.

Discussion on evaluation techniques were helpful to the participants in the following areas :

- (a) Construction and administration of objective type tests.
- (b) Understanding methods of continuous assessment.
- (c) Understanding grade system, concept of periodical tests and concept of remedial measures.

#### Selection of Experts

The experts should be invited from department of education as well as from other departments who have good knowledge of content as well as pedagogy.

Interdisciplinary approach should be the basis for inviting experts for the orientation course.

#### Usefulness of the Programme

1. Most of the respondents (P.Group 100% and I.Group 88%) have felt that orientation programme has helped them in their teaching profession.
2. Both groups have indicated the following aspects of the programme as being helpful to them :
  - (i) To understand the methods of teaching,
  - (ii) To develop the skills of effective teaching,
  - (iii) To systematize the instruction,
  - (iv) In understanding the behaviour of students,
  - (v) To gain self confidence in teaching, and
  - (vi) In understanding the educational psychology.

#### Evaluation of Teaching

1. The participants have a favourable opinion (P.Group = 96% and I.Group = 69%) towards seeking feedback regarding their teaching.
2. The participants of both groups are in favour of evaluating their teaching through comments of colleagues on the basis of their observation and also getting feedback from the students.

3. The respondents have indicated that evaluation of their teaching by colleagues and observation by students has helped them to improve their teaching.
4. The respondents accept the fact that through orientation programme they have acquired certain teaching skills viz., selection of appropriate teaching methods, improving teaching techniques and planning of teaching systematically.

#### Difficulties Faced Before Joining the Course

1. The trained teachers have pinpointed the difficulties faced by them before undergoing this programme. They are;
  - (i) Respondents were not aware of effective methods of teaching earlier,
  - (ii) Respondents were not aware of techniques of dealing with students,
  - (iii) Respondents lacked self confidence in teaching,
  - (iv) Respondents faced difficulties in presenting content through lecture method,
  - (v) Respondents were not aware about the principles of motivation,
  - (vi) Respondents were not aware how to use audio-visual aids,
  - (vii) Respondents were not aware of techniques to evaluate teaching.

### Gains from the Course

The respondents of P.Group and I.Group could overcome these problems as a result of the training :

- (i) by understanding the students psychology,
- (ii) by understanding the techniques of systematic teaching,
- (iii) by getting the knowledge of motivating students,
- (iv) by gaining self confidence in teaching,
- (v) by understanding the planning of lecture,
- (vi) by acquiring the skills of evaluation techniques,
- (vii) by getting the skills of using audio-visual aids in teaching,
- (viii) by acquiring skills in setting question,papers,
- (ix) By understanding the internal assessment system,
- (x) by participating in discussion or seminars,
- (xi) by constructing model test papers,
- (xii) by planning project work.

### Suggestions

The respondents of P.Group and I.Group give some suggestions for the improvement of the programme such as:

- (i) Special financial aid to be given to the participants in terms of stipend or scholarship and T.A., D.A., etc.
- (ii) Book aid and reading material to be given to the participants.

- (iii) To include more practical courses with regard to teaching skills.
- (iv) There should be a provision for duty leave to attend the inservice course.
- (v) Provision should be made for facilities of audio-visual aids for practice.
- (vi) Subject experts should be invited for lectures.
- (vii) Such refresher course should be conducted frequently.
- (viii) Content along with methodology should also be included in the course.
- (ix) Equal emphasis should be given on internal as well as external evaluation.

The participants of pre-service programme are in the need of job primarily and the orientation programme comes later. This indicates that the respondents favour in-service programme more than the pre-service programme.

The Department of Education of the Universities are in a better position to conduct such programmes than any other agency.

#### Attitude

The attitude of pre-service group (M=146.23) is more favourable than of the in-service group (M=140.24). Similarly the attitude of in-service group is more favourable than that of the untrained group (M=115.32) towards the orientation programme. This can be shown as :

P.Group > I.Group > U.Group

Sex and teaching experience of teachers is not playing any significant role in forming the attitude towards orientation programme.

The attitude of the two groups of in-service programme changed significantly at .01 level with the input of orientation programme.

As a result of the pre-test and post-test, the usefulness of the programme is evident.

The respondents of the pre-service and in-service group have a favourable attitude towards the teaching methods, evaluation and psychological aspect in their order of hierarchy.

100% respondents of pre-service group, 97% respondents of in-service group and 68% respondents of untrained group have a favourable attitude towards orientation programme.

#### A Proposed Syllabus

The investigator has formulated four papers and a practical course for providing training either as pre-service or inservice programmes. A brief outline of the proposed syllabus is given below :

#### Theoretical Aspects

Paper I : Educational Philosophy and Sociology

Paper II: Educational Psychology

Paper III : Administration, Curriculum & Problems  
of Indian Higher Education

Paper IV : Teaching Methods & Evaluation

### Practical Aspects

- Demonstration of Teaching
- Construction of test items
- Develop Question Bank
- Educational Technology
- Micro-teaching Session

The experts have given a favourable opinion about all the topics suggested by the investigator.

### Reactions of the Programme Organizers

1. The heads of the departments took the initiative to introduce such courses in their institutions.
2. The Vice-Chancellors and Syndicate of the different universities helped the departments to introduce such courses.
3. There was resistance in the beginning, in one of institutions where it was made obligatory for probationary teachers. The resistance was withdrawn when the programme was chalked out in consultations with the deans and heads of different departments of the university.

4. The departments of Education receive active cooperation from other department in the smooth functioning of the course.
5. The organizers have suggested following types of incentives for the participants of the course :
  - (a) by providing financial assistance in terms of T.A., D.A. Assistance to be provided to purchase books and other material.

~~Area of interest~~ (b) approaches:

- (i) Recognition should be given to the certificates and diplomas while considering participants for employment or promotion.
  - (ii) During the period of evening courses the teachers should be allowed less load of work to enable them to participate actively in seminars.
  - (iii) There should be provision to invite experts from outside universities as well.
6. The organizers of the pre-service course have difficulties in organizing the internship or teaching periods in colleges or universities.

### Conclusion

An orientation programme of university/college teachers is an innovation or a new dimension in the area of teacher education. Such orientation programmes, in different forms, are prevalent in different countries, like Australia, U.S.S.R., U.K. and U.S.A. On similar lines, the Education Commission (1964-66) pin-pointed the importance of some sort of orientation for teachers of higher education. The Commission pleaded that "For them, some suitable form of training and orientation is essential, not only to overcome their initial teaching troubles and to create a sense of confidence, but also to give them a reasonable understanding of educational objectives and purposes, *raison d'etre* and place of their special subject in the curriculum of new methods and techniques of teaching and learning, and a knowledge of psychology on which good teaching is based."

This study has brought out some limitations of the programme and some merits of the programme. Limitations seem to be few. Some aspects of the syllabus are not liked, and the lecture approach is not appreciated. Some suggestions have been provided.

One of the significant aspects of this investigation is that it supports the expectations or the proposal of the Education Commission (1964-66) regarding the training or orientation of the university/college teachers. It is evident from this study that 100 percent respondents of the pre-service group, 76 percent of the in-service group have found the

orientation courses useful. From the sample of untrained college/university teachers, 80 percent expect that such courses would be helpful to them to improve their teaching.

The consensus of opinion of both the pre-service respondents and the in-service respondents is in favour of the in-service programme.

The study also indicates that participants have a favourable attitude towards the courses. This helps us to believe that the orientation course is considered of utility by both the groups (i) those who have undergone such a training, and (ii) those who have not undergone such an orientation course.

Both the pre-service and inservice groups, under study, have further supported the expectations of the Education Commission of 1964-66. The groups (P+I) have responded that these orientation courses have given them the requisite confidence to teach effectively. They have been able to understand the different techniques of teaching, and the behaviour of the students. They have also understood how to motivate the students. These different aspects have helped them to establish better rapport with the students. The participants report that they faced many difficulties in respect of their teaching <sup>before the course.</sup> The participants have indicated that they have benefitted by the orientation course in many respects. These are a few instances of such outcome of the orientation programmes which helps us to believe that the suggestions of the Commission of 1964-66 are of relevance. In

most highly skilled professions and education is certainly one, training is regarded as an essential qualification. The teachers of higher education also need training. This study strengthens and supports the views of the Commission.

Looking to the present and future needs of Indian universities and colleges such programmes need to be strengthened and to be popularized. There is not only explosion in the subject matter area, but there is explosion in the theories of learning. These theories of learning have assumed more importance because in our colleges and universities the structure of student population is changing. The students of weaker sections and first generation students are entering in the institutions of higher education. The teachers should understand their psychological needs, aspirations and limitations. The new theories of learning will help the teacher to teach different types of students of his class.

With the entering of the television or C.C.T.V. and the computer, the teaching techniques need rethinking. The use of educational technology effectively in the classroom should form a part and parcel of any orientation programme.

The University Grants Commission (UGC) has propagated many new schemes, for colleges and universities. The concept of autonomous college is taking a shape and many of the colleges have been reorganized as autonomous colleges. Under autonomous colleges, teachers have to assume more responsibilities in

teaching learning process and evaluation. Similarly, the semester system has been introduced in some universities of India. The semester system has many associated aspects e.g. flexibility in courses, inter-disciplinary approach, credit system, internal assessment, continuous assessment, grade system and the like. The U.G.C. is keen to bring in reforms in the examination pattern in the Indian universities. The idea of open university has also taken shape. All these new dimensions in the field of higher education, can be achieved by preparing the teachers for the change. Much can be achieved in this direction through the orientation courses for college and university teachers.

The question remains whether there should be pre-service or in-service types of courses. The pre-service models of Calicut and Annamalai are novelties and wherever circumstances are favourable, these should be encouraged.

The universities of Madras and Madurai have institutionalized the inservice programmes for teachers of higher education. These programmes are also new dimensions in the field of teacher education. There is the need that such in-service programmes should be made more popular. These should serve as service-centred programmes and the teachers of higher education should feel motivated to attend such programmes according to their felt needs.

The M.S.University model also deserves attention. Here, it is obligatory for teachers on probation to attend such a

course. This has many advantages: (i) the teachers are secure of their jobs; (ii) they receive in the beginning a course on pedagogical aspect by the experts and this gives them the required confidence; (iii) they can also talk about their difficulties, which they face in their new profession; (iv) the courses are interdisciplinary in nature and this increases their knowledge regarding other subjects. This model can also be tried out wherever it is feasible.

It may be clear from this discussion that no one model is complete. Different types of courses should be evolved through the cooperative efforts of the departments of education and other departments or faculties of the universities. The involvement of teachers from other departments and faculties will go a long way in the success of the programme. This interdisciplinary approach may also help in formulating new research areas in the fields of curriculum, teaching methods and the evaluation procedures in universities and colleges.

In this respect the role of the University Grants Commission (UGC) is significant. It should continue to finance their scheme of short term courses on Methodology and Evaluation for college teachers. The University Grants Commission has another important role to play. It should financially help in the establishment of cells on higher education in the departments of education in colleges and universities. These Cells should initiate courses on higher education for M.Ed. and M.Phil. The researches on different aspects of higher education should also

be undertaken. These higher education Cells or Units should also publish literature on teaching methods, administration and evaluation procedures for students and teachers of higher education. More and more such Centres are needed throughout the country.

#### Suggestions for Further Study

1. A follow up study of the trained teachers of higher education through various programmes.
  2. A study of the resistance or barriers for such orientation courses.
  3. To study the preparation of different models of lecture planning and their effectiveness.
  4. A study of an effectiveness of different methods of teaching in different subjects.
  5. To develop a pre-service model of teacher education for the university teachers taking into consideration their areas of specialization.
  6. A comparative factorial study of the personality profile, attitude towards teaching, and creativity found in eminent teachers, inservice teachers and preservice participants, may be undertaken.
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