Chapter VI

SUMMARY AND CONCLUSION

I. The Problem

Various methods of teaching have been proposed and are being practiced at the college stage. Some of these methods and techniques are - lecture, library, discussion, tutorial, seminar, team teaching, assignment, laboratory teaching, language laboratory, programmed instruction, buzz system etc. But in view of the fact that our college classrooms by and large consist of 100-150 students and that the educational facilities in our colleges are not that adequate, we have to depend on lecture method for a long time to come. Lecture method is also appropriate when the information is not available in a more convenient and efficient form such as textbook, and also when the information must be integrated from a number of sources.

But unfortunately, the lecture method itself has been degenerated into dictation of notes or reproduction of outdated material. The method has failed to provide proper insight into subjects for students curbing their creativity. As a result, these lectures have become unpleasant, uninspiring and even boring.
A well tried out approach to improve teaching competence is the skill based microteaching approach. Here the lecturer undergoes a skill based microteaching course on different lecturing skills till he achieves the desired efficiency in each skill. It is exactly in this premise that the present research study is construed keeping in view the Indian conditions.

1. Statement of the Problem

The major purpose of the present investigation is to devise self-instructional microteaching course for improving college teaching and to evaluate its effectiveness.

2. Specific Objectives of the Study

The specific objectives of the study are -

i. To identify basic lecturing skills and the corresponding instructional behaviours;

ii. To prepare lecture rating scale;

iii. To prepare self-instructional microteaching course (SING) materials;

iv. To provide in-service training to the college teachers through self-instructional microteaching course;
v. To evaluate the effectiveness of the self-instructional microteaching course material in improving college teaching;

vi. To construct a rating scale to study the reactions of participant lecturers to the SIMC;

vii. To study the reactions of participant lecturers to the SIMC.

3. Scope of the Study

i. The self-instructional microteaching course was confined to the following four basic lecturing skills -
   a. Orientation skill,
   b. Skill of explaining,
   c. Skill of stimulus variation, and
   d. Skill of achieving closure.

ii. The self-instructional microteaching course material was prepared with examples drawn from History, Political Science, and Sociology subjects only.

iii. The study was confined to in-service college lecturers teaching History, Political Science,
and Sociology subjects working in degree colleges of Davangere and Belhar (Karnataka State) during the year 1981-82.

4. Hypotheses

In pursuance of the fifth objective of the study stated earlier in this chapter, the following research hypotheses were set up—

i. Self-instructional microteaching course will be effective in improving teaching competence of college teachers in terms of the following lecturing skills taken together—

a. Orientation skill,

b. Skill of explaining,

c. Skill of stimulus variation, and

d. Skill of achieving closure.

ii. Self-instructional microteaching course will be effective in improving the orientation skill of college teachers.

iii. Self-instructional microteaching course will be effective in improving the skill of explaining of college teachers.
iv. Self-instructional microteaching course will be effective in improving the skill of stimulus variation of college teachers.

v. Self-instructional microteaching course will be effective in improving the skill of achieving closure of college teachers.

vi. College teachers sustain teaching competence in terms of the four lecturing skills taken together, strengthened by the self-instructional microteaching course even two months after the training.

vii. College teachers sustain the orientation skill strengthened by the self-instructional microteaching course even two months after the training.

viii. College teachers sustain the skill of explaining strengthened by the self-instructional microteaching course even two months after the training.

ix. College teachers sustain the skill of stimulus variation strengthened by the self-instructional microteaching course even two months after the training.

x. College teachers sustain the skill of achieving closure strengthened by the self-instructional
microteaching course even two months after the training.

II. The Procedure

Persuance of the objectives of the study called for -

1. Identification of basic lecturing skills and the corresponding instructional behaviours,

2. Preparation of Pharyad Lecture Rating Scale (PLRS),

3. Preparation of self-instructional microteaching course (SIMC) materials,

4. Application of treatment (in the form of SIMC) to the 50 (subjects)/Conducting the experiment,

5. Evaluation of the results of the experiment,

6. Preparation of rating scale to know the reactions of participant lecturers to the SIMC as a whole and to its major components, and

7. Analysis of reactions of participant lecturers to the SIMC.

1. Identification of basic lecturing skills and the corresponding instructional behaviours

On the basis of observation of fifty lectures of
experienced social science college teachers of Chitradurga district, opinion of experienced teacher educators, personal experience as a lecturer in college of education, and review of related literature, four basic lecturing skills and the corresponding observable, instructional behaviours were identified. They are as follows—

1. Orientation skill,
2. Skill of explaining,
3. Skill of stimulus variation, and
4. Skill of achieving closure.

These skills constitute teaching competence of college teachers for the present study.

See ante pp. 67 to 84 for the instructional behaviours corresponding the above mentioned skills.

2. Preparation of Bharwad Lecture Rating Scale

As the major purpose of the study was to devise self-instructional microteaching course for improving college teaching in terms of the four basic lecturing skills, only those four skills were taken into consideration to develop the teaching competence scale. The scale thus covered the following lecturing skills (and the corresponding instructional behaviours) only—
i. Orientation skill with four instructional behaviours,

ii. Skill of explaining with seven instructional behaviours,

iii. Skill of stimulus variation with four instructional behaviours, and

iv. Skill of achieving closure with four instructional behaviours.

The preparation of DIES involved the following steps —

i. Finalising the directions for the use of the rater,

ii. Determining weightages to different skills and its instructional behaviours/components,

iii. Finalising the rating procedure, and

iv. Preparation of rater's manual containing set of criteria for judging the quality of each instructional behaviour/component.

See Appendix A for the scale along with the directions and Appendix B for the 'Rater's Manual'.
The inter-rater reliability of the scale was found to be 0.76 \( (n = 20) \). The convergent validity of the scale was found to be 0.74 \( (n = 20) \). The scale was also screened by 8 judges. They found the scale to be quite comprehensive. This implies that scale has content validity.


A. Hand-books

Self-instructional materials were prepared using microteaching approach. The steps involved in the instructional model are as follows -

1. Study skill
2. Listen to audio model of skill
3. Demonstrate skill based micro lecture
4. Re-study skill
5. Re-listen to audio model of skill
6. Finalize micro lecture
7. Present micro lecture
8. Evaluate micro lecture and get self-feedback
9. Refine micro lecture
10. Present refined micro lecture
11. Evaluate refined micro lecture.
The self-instructional model uses symbolic and audio modellings of skills in place of visual or perceptual modelling for the following reasons:

i. Researches in India (4, 34, 36, 57, 88, and 92) have revealed that both perceptual and symbolic modellings are equally effective in understanding the skill to be practised.

ii. In India symbolic or audio modelling will be feasible for the in-service training of teachers.

Self-instructional materials were written for the four skills mentioned below:

i. Orientation skill,
ii. Skill of explaining,
iii. Skill of stimulus variation, and
iv. Skill of achieving closure.

The development of the material involved the following steps:

i. Preparation of the draft material
ii. Try-out on small samples
iii. Revision of the material
iv. Second try-out
v. Second revision and finalisation of the material.
Structure


Contents of both the sections were written under the following headings -

Section 'A' - Microteaching
i. Meaning of microteaching
ii. Steps of microteaching
iii. Rationale of microteaching
iv. Research
v. The present course

Section 'B' - Self-instructional microteaching course
i. Purpose
ii. Content and organisation
iii. Practice
iv. Steps in the instructional model of the self-instructional microteaching course
v. Time schedule for the course activity
vi. Typical calendar of activities
vii. Contents of audio cassette and directions for operation of audio tape recorder

Self-instructional material of each hand-book was written under the following headings -
a. Objectives
b. Meaning and significance of the skill
c. Components (Instructional behaviours) of the skill
d. Description of the components (Instructional behaviours) of the skill
e. Model micro lecture plan for the skill
f. Micro lecture planning supplement
g. Evaluation proforma for the skill
h. Evaluation analysis form 'A'
i. Evaluation analysis form 'B'
j. Concluding remarks.

The final course materials were cycled in the form of hand-books. The title given to the five cycled hand-books is "Self-Instructional Microteaching Course for College Teachers - Teachers' Hand-book."

See Appendix E for the hand-books.

B. Audio Cassette

The audio cassette was also developed at the Psychology laboratory of M.M. College of Education, Davanagere. The development of the audio cassette involved the following steps -

i. Writing all the model explanations and model micro lectures according to their respective serial number.
ii. Writing directions for operation of audio cassette recorder, for using audio cassette and for storing the audio cassette

iii. Recording all the model explanations and model micro lectures at the time of presentation

iv. Replaying the recorded part of the cassette for the purpose of try-out

v. Finalisation of recording work

4. Sample

Ten (8 male and 2 female) college lecturers teaching History, Political Science and Sociology in the degree colleges of Haribar and Pavanagere were involved in the present study. Age of participants varied from 25 to 44 years, averaging 32 years 6 months for the group as a whole. Teaching experience ranged from 2 months to 14 years, averaging 7 years 6 months.

5. Treatment (The Experiment)

The main objective of the experimental treatment was to improve teaching of college teachers particularly relating to four lecturing skills i.e., orientation skill, skill of explaining, skill of stimulus variation, and skill of achieving closure.
The duration of the whole experimental treatment was of forty-five days at the rate of about two hours a day. The course activities during the experimental periods were as follows -

1. Beginning five days (for introductory activity) -
   a. First and second day - Studying the concept of microteaching
   b. Third day - Studying the concept of self-instructional microteaching course
   c. Fourth day - Studying the calendar of course activities
   d. Fifth day - Studying the contents of audio cassette and operation of audio tape recorder

2. Sixth to Fifteenth day -
   a. Understanding orientation skill
   b. Planning micro lecture on orientation skill
   c. Practising orientation skill

3. Sixteenth to Twentyfifth day -
   a. Understanding skill of explaining
   b. Planning micro lecture on skill of explaining
   c. Practising skill of explaining
iv. Twentysixth to Thirtyfifth day -
   a. Understanding skill of stimulus variation
   b. Planning micro lecture on skill of stimulus variation
   c. Practising skill of stimulus variation

v. Thirtysixth to Fortyfifth day -
   a. Understanding skill of achieving closure
   b. Planning micro lecture on skill of achieving closure
   c. Practising skill of achieving closure

Each skill was practised for ten days.
Each subject was supplied with the following materials -

i. Five Teacher's Hand-books of self-instructional microteaching course,

ii. Audio cassette containing model micro lectures and model explanations, and

iii. Audio cassette recorder (if it is not with the participant lecturer).

6. Collection of Experiment-Related Data

Two regular lectures of participant lecturers were observed and assessed using the DIBS before the experiment. The average scores in percentage were taken as the pre-experisential scores of lecture competence.
Immediately after the experimental treatment, two regular lectures of the participant lecturers were observed and assessed using the DIES. The average scores in percentage were taken as the immediate post-experimental scores.

After two months of the experimental treatment, once again two regular lectures of the participant lecturers were observed and assessed using the DIES. The average scores in percentage were taken as the retention/delayed post-treatment scores.

7. Reactions of the Participant Lecturers to the SIEC - Preparing a Rating Scale

Preparation of the rating scale involved the following steps -

i. Collection of reactions of the participants to the course as a whole and to the different aspects of the course during the experimental period,

ii. Screening the collected pool of statements,

iii. Finalisation of statements and preparation of rating scale, and

iv. Writing of directions for using the scale.

The final rating scale consisted of 36 statements.
representing positive and negative reactions to the
course as a whole and to the different aspects of the
course as detailed below -

i. Self-instructional microteaching course - 10
   statements
ii. Objectives - 2 statements
iii. Description of the components of the skill - 3
    statements
iv. Model micro lecture plan - 4 statements
v. Audio cassette - 2 statements
vi. Micro lecture planning supplement - 1 statement
vii. Evaluation proforma - 1 statement
viii. Evaluation analysis forms - 3 statements
ix. Number of pupils for practice - 1 statement
x. Time to present micro lecture - 1 statement
xi. Time schedule to practice each skill - 2 statements
xii. Practice of skill - 4 statements
xiii. Presenting refined micro lecture - 1 statement
xiv. Repetition of the cycle - 1 statement.

The participant lectures were required to express their
reactions to the course with reference to each statement on a
three point scale - agree, undecided, and disagree. They were also required to offer concrete suggestions for the improvement of the course with reference to the components wherever necessary. Some blank space was also provided at the end of the scale to record additional remarks or reactions, if any, on any aspect of the course or the course as a whole. See Appendix H for the final scale.

8. Collection of Reactions Data

The rating scale was cyclostyled and distributed to the participant lecturers immediately after the experimental treatment and the reactions of the participants to the SINC were collected.

9. Techniques Employed for the Analysis of Data

The experiment related data were subjected to statistical analysis by using "t" test for testing the research hypotheses set up in the present study. The effectiveness of the course was tested by comparing pre-treatment scores with immediate post-treatment scores and immediate post-treatment scores with delayed post-treatment scores.

Reactions of the participants to the SINC were analysed in terms of percentages.
III. Findings

The major findings of the study are -

i. The self-instructional microteaching course is effective in improving teaching competence of college teachers in terms of the following lecturing skills taken together -
   a. Orientation skill,
   b. Skill of explaining,
   c. Skill of stimulus variation, and
   d. Skill of achieving closure.

ii. The self-instructional microteaching course is effective in improving the orientation skill of college teachers, studied and practised.

iii. The self-instructional microteaching course is effective in improving the skill of explaining of college teachers, studied and practised.

iv. The self-instructional microteaching course is effective in improving the skill of stimulus variation of college teachers, studied and practised.

v. The self-instructional microteaching course is effective in improving the skill of achieving closure of college teachers, studied and practised.
vi. College teachers sustain teaching competence in terms of the four skills taken together, strengthened by the self-instructional microteaching course even two months after the training.

vii. College teachers sustain the orientation skill strengthened by the self-instructional microteaching course even two months after the training.

viii. College teachers sustain the skill of explaining strengthened by the self-instructional microteaching course even two months after the training.

ix. College teachers sustain the skill of stimulus variation strengthened by the self-instructional microteaching course even two months after the training.

x. College teachers sustain the skill of achieving closure strengthened by the self-instructional microteaching course even two months after the training.

xi. Majority of participant lecturers favoured the self-instructional microteaching course for the improvement of teaching competence.

xii. For the further strengthening of the self-instructional microteaching course, all the participant lecturers suggested that video cassette and video tape recorder be used at the time of experiment.
The following are the major by-products of the study -

i. Dharwad Lecture Rating Scale,

ii. Self-instructional microteaching course materials, and

iii. Scale to assess the reactions of participant lecturers to the SIMC.

IV. Discussion and Implications

It is seen from the results that study and practice of orientation skill, skill of explaining, skill of stimulus variation, and skill of achieving closure through SIMC improved the use of these skills in regular lecture of participant lecturers. The skills acquired in the microteaching setting are transferred to the regular lecturing process. This is in full agreement with the findings of Borg et al. (14), and Perrott (84), Bhatt and Suryavanchi (80), and Baikert (6).

The results also reveal that college teachers sustain the lecturing skills namely orientation skill, skill of explaining, skill of stimulus variation, and skill of achieving closure, strengthened by the SIMC even two months after the course. So the gains acquired through SIMC appear to be of permanent nature.
The participant lecturers expressed favourable reactions to the SZMC. Perrott (85) and Beilkeri (6) too found the same results.

In connection with the use of video cassette and video tape recorder as suggested by the participants, Allen and Ryan (2154-55) have expressed that video taping is not an essential part of the microteaching process. In many places microteaching has been carried out successfully without the use of this equipment. Video tape recording is frill. However video taping strengthens the microteaching process in two ways — First, it excels for both the development and display of models of the various teaching skills. Second, the video tape recorder is a powerful feedback source in the microteaching process. It helps the trainee understand his own performance and also serves as a teaching tool for the supervisor.

In view of the findings of the study, it can be concluded that one of the promising programmes for improving lecture competence of college teachers in the Indian setting is self-instructional microteaching course based on the instructional model suggested in this study.

The DIRS can be specifically used to assess the lecture competence of social science college teachers in
India. It can also be used to diagnose weak lecturing skills of social science college teachers.

The SINC can be used as a remedial course to strengthen the orientation skill, skill of explaining, skill of stimulus variation, or skill of achieving closure of social science college teacher in Indian setting, if he is found to be deficient in any of these skills.

From the results obtained in this study and reactions of participant lecturers, it appears that the unique attributes of microteaching and audio tape recordings could motivate participants to improve instructional behaviours and could facilitate desired changes.

Finally it may be emphasized that microteaching technique and audio tape recordings do not offer a panacea to all the problems of college teaching. In the study the investigator focussed on this technique and medium, assuming that their objectivity and practicability would be likely to appeal college teachers and they would be effective tools in efforts to improve college teaching.

V. Suggestions for Further Research

The experience of present investigation has uncovered a few research studies that could be undertaken. They are -
i. Standardised lecture competence scales for different subjects (Science, Commerce, Engineering, Agriculture, and Medicine etc.) may be developed.

ii. Self-instructional microteaching courses may be prepared for all the lecturing skills related to different subjects taught in colleges and their effectiveness studied experimentally.

iii. Effectiveness of the use of video cassette and video tape recorder may be studied in future experiments.