MAJOR FINDINGS, CONCLUSIONS AND SUGGESTIONS

- Major Findings of the Study
- Conclusion
- Education Implications
- Suggestions for Further Research
Major objectives of the study were to find out the level of Instructional Technology Awareness of Primary School Teachers of Kerala and to assess their Inservice Training Needs.

This was studied by means of the following:

1. Estimation of the Mean scores and standard deviation of the level of Instructional Technology Awareness among the total sample of teachers and among different sub samples of Teachers classified on the basis of variables like Gender, Teaching Level, Type of School Management, Type of School District, Teacher Training Qualifications and Length of Service.

2. Comparison of the Mean Scores of Instructional Technology Awareness between different sub samples formed on the basis of Classificatory Variables.

3. Estimation of the percentages of preference to different Inservice Training Needs among the total sample of teachers and among different sub samples formed based on Classificatory Variables.

4. Testing the significance of the dependence of Inservice Training Needs with each of the Classificatory Variables.

5. Identification of the Highly Needed Themes and the themes requiring comprehensive training for Inservice Training.

6. Computation of the extent of Computer literates among the total sample and for different sub samples of Teachers.

7. Consolidation of opinions of Teachers on the effectiveness of on-going Inservice Training Programmes.

8. Consolidation of suggestions and opinion of Teachers regarding the conduct of Inservice Training Programmes.
Major findings derived by means of the above procedures are summarised and presented in this chapter. Conclusion based on the findings educational implications of the findings and suggestions for further research in the area are also given in this chapter.

5.1 MAJOR FINDINGS

Major findings of the study with regard to Instructional Technology Awareness and of Inservice Training Needs of Primary Schools Teachers of Kerala are the following.

1. (1) Instructional Technology Awareness of Primary Schools Teachers of Kerala is appreciably moderate. The level of awareness is appreciably moderate on four of the five domains of Instructional Technology viz., Design, Development, Utilisation and Evaluation. The level of Instructional Technology Awareness is not satisfactory for the Management Domain.

(2) Distribution of the scores of Instructional Technology Awareness is slightly skewed but not badly.

(3) The number of Teachers Highly Aware in Instructional Technology is greater than number of Teachers Low Aware for the total sample and for all the sub samples except in the case of Teachers with Length of Service greater than twenty-five years.

(4) The number of Teachers Highly Aware in Instructional Technology is greater in the case of Teachers with Length of Service less than five years and least among Teachers with Length of Service greater than twenty-five years.

(5) The number of Teachers Highly Aware is higher among

(i) Female Teachers than Male Teachers

(ii) Government Teachers than Aided School Teachers.

(iii) Lower Primary Teachers than Upper Primary Teachers
(iv) D.P.E.P Teachers than Non. D.P.E.P District Teachers

(v) Teachers qualified with both B Ed. and T.T.C than Teachers qualified T.T.C or B Ed.

(vi) Teachers with service less than five years than Teachers with services greater than five years.

II When the mean scores of Instructional Technology Awareness was compared between sub samples of teachers formed on the basis of Classificatory Variables, it was found that,

(i) Gender difference in Instructional Technology Awareness among teachers is not significant in any of the Domain of Instructional Technology.

(ii) Significant difference in Instructional Technology Awareness exists between Teachers based on Level of Teaching.

(iii) There is significance difference in Instructional Technology Awareness between teachers based on School Management Type.

(iv) Difference in Instructional Technology Awareness between DPEP Teachers and Non DPEP Teachers is not significant.

(v) Teacher Training Qualification has no significant effect on any of the domains of Instruction Technology Awareness.

(vi) Length of Service has significant effect on the Instructional Technology Awareness in four Domains. (Design, Development, Utilisation and Management) of Instructional Technology.

III Inservice Training Needs assessment revealed the following.

(i) Almost all the themes included in the Checklist were found to be Inservice Training Needs. However, 49 themes having percentage of preference 75 and above (combined percentage for the two modes of responses viz., Need training in certain areas and Need comprehensive
training) were rated as Highly Needed Themes for future Inservice Training programmes.

Domain wise distribution of these 49 Highly Needed Themes is as follows, indicating that teachers need Inservice Training more on themes under Design, Development and Utilization Domains.

DESIGN DOMAIN (18 Highly Needed Themes out of the 26 listed themes - 69.23% representation)


DEVELOPMENT DOMAIN (7 Highly Needed Themes out of 10 listed themes - 70% representation)


UTILISATION DOMAIN (17 Highly Needed Themes out of 19 listed themes - 89.47% representation)

MANAGEMENT DOMAIN (6 Highly Needed Themes out of the 11 listed themes-\textbf{54.54\%} representation)


EVALUATION DOMAIN (1 Highly Needed Theme out of the 7 listed themes-\textbf{14.28\%} representation)

Theme : 1) Action Research.

IV Among the \textbf{49 Highly Needed Themes}, \textbf{15} themes were identified as \textit{Very Highly Needed Themes} as Teachers need comprehensive training in these areas. These 15 themes are the following...


V When Needs were tested for dependence with the Classificatory Variables, results derived are the following:

i Needs depend on Gender in 9 themes only. These nine themes are : Debates, Symposia, Workshops, Observations, Year Plan Preparation, Continuous and Comprehensive Evaluation (CCE), Part II Evaluation, Part III Evaluation and Recording Responses in Teaching Manual.

ii Needs depend on Teaching Level on 10 themes only. These ten themes are : Seminars, Debates, Symposia, Camps, Local Texts Preparation, Integrated Approach, Spiral Approach, Concept Attainment, Content Enrichment and Continuous Evaluation (CE).


v Needs depend on Teacher Training Qualifications on 4 Needs. These four themes are: Activity Based Curriculum, Contents of Newspaper, Magazines, Weeklies, etc., Integrated Approach and Spiral Approach.

vi Needs depend on Length of Service on 5 needs. These five themes are: Learning Corners, Utilisation of Support Services, Continuous and Comprehensive Evaluation, Part II Evaluation and Part III Evaluation.

VI Results yielded by studying the three minor objectives are the following,

i) Among the total sample of teachers only 23.65 % are computer literates. More number of computer literates are among Male Teachers (37.93 %) and the least (12.20 %) is among Teachers having Service more than 25 years.

ii) Majority of Primary School Teachers (55.46 %) reported that the ongoing Inservice Training Programmes are effective. The high rate of effectiveness (65.16 %) is reported by Teachers with Service up to 5 years and least rate of effectiveness is reported by Male Teachers (39.66 %).
iii) The most recommended themes for Inservice Training are the following as responded by Teachers against an open ended questionnaire. Computer Education, Communicative Approach, Psychological Bases of Instruction, Projects, Seminars, Mathematics Content Enrichment, Mathematics Instruction, Science Experiments and Experiment Projects, Work Experience, Art Education, Health Education, Preparation of Teaching Learning Materials, Effective CCE, Content Enrichment and Methods of Environmental Science Education, Unit Plan Preparation, More effective methods for teaching Reading and Writing.

iv) The major suggestions of Teachers for improving Inservice Programmes are the following. Proper planning and time management of Inservice Training Programmes, Improving subject competency of the Trainers, Avoiding training on school working days, Avoiding repeated themes of training, More training in new instructional areas, Vacation training for forthcoming academic year, Try outs/Demonstration Classes, Practical Illustrations of theories in actual instructional settings, Handling of heavy work load and Curriculum, More effective monthly Cluster Training, Monitoring and evaluation of training programmes, Assurance of availability of support materials and support services for implementing training programmes and More training from better subject experts, DIET faculties etc.

5.2. CONCLUSIONS

Summary of findings led the investigator to conclude as follows:

Primary School Teachers of Kerala State are moderately aware of Instructional Technology. It is somewhat lacking in the Management Domain when compared to other four Domains of Instructional Technology viz., Design, Development, Utilisation, and Evaluation.

Majority of the 73 themes listed as Inservice Training Needs were found as Needs for either Comprehensive Training or for Training in Certain Areas. However, 49
themes are identified as *Highly Needed Themes* and among these 15 themes are wanted by Teachers for Comprehensive Training.

When identified Inservice Training Needs were analysed Domain wise, it was found that most of the Needs are from the Design, Development and Utilisation Domains. Majority of the needs do not depend on Gender or Teaching Level or School Management or School District or Teacher Training Qualification or on Length of Service. Only some themes depend on these Classificatory Variables.

**5.3. EDUCATIONAL IMPLICATIONS.**

On the basis of the major findings and on the conclusions derived, the investigator puts forth the following recommendations for the better use of Instructional Technology; better conduct of Inservice Training Programmes and there by for effective instruction to primary school pupils of Kerala.

1. Make long range planning and arrangement for Inservice Training Programmes on Design, Development and Utilisation Domains of Instructional Technology as it was found that majority of the high rated needs for Inservice Training were of Design, Development and Utilisation Domains. It was also found that Instructional Technology Awareness is comparatively low in aspects of Management Domain. Therefore, arrange programmes for the Management aspects also.

2. Among the 73 themes provided in the checklist for Inservice Training Needs Assessment, it was found that 15 themes are *Very Highly Needed Themes* as majority of Teachers need *Comprehensive Training* in these 15 themes. Such themes are the following. Computer aided Instruction, New trends in Teaching Learning Materials, Handling of Overhead/Film/Slide Projectors, Psychological bases of Instruction, Information Processing Approach, Multiple Intelligence, Handling pupils with Learning Disabilities, Audio Visual Media Equipments, Action Research, Constructivism, Workshops, Multi Level Instruction, Life Skills, Handling of Large Classes and Control of Delinquency among pupils. An inspection of these themes reveals that these *needs* are real.
cross sections of the themes as felt through interaction with Teachers. Even though the themes rated for *Comprehensive Training* are not new or not out of syllabus of the preservice training, these were listed as the top needed only because a good understanding of these themes is unavoidable for successful instruction in these days.

3. Make aware of the teachers through Inservice Training Programmes that Instructional Technology is not to be conceptualised just in terms of computer hardwares and softwares, but also in terms of human skills, resource management, problem solving and instructional settings.

4. It is often found that among teachers psychological, mechanical, mathematical and professional fears exist in using Instructional Technology. This may be one of the reasons for low computer literacy rate and high rating of need for Inservice Training on instructional uses of computers. Such fears are to be eliminated by incorporating or involving teachers with such activities.

5. Arrange Inservice Training Programmes for effective utilization of computer mediated resources; give updated and latest versions of computer training and also make teachers competent on preparation of instructional softwares. By this teachers can confidently provide Computer Aided Instruction

6. Provide linkage between Preservice and Inservice Teacher Training Programmes to supplement and complement each other.

7. Equip the Teachers with research based Teaching Learning Materials, emerging transactional approaches, instructional uses of Information and Communication Technology, and with adequate technological facilities.

8. Teachers are to be trained to determine when, why and how of Information and Communication Technology should be effectively utilised in instructional situations.

10. Place learner and learning in the heart of technology based instruction.

11. Find out the barriers for effective implementation of Instructional Technology through scientific investigation. Lack of proper planning, unsuitability of the time, less demonstrations and try outs, insufficiency of incentives, lack of expertise of Resource Persons, lack of follow-up sessions, programmes not assessing the conceptual needs of teachers, outdated teacher training and support system, non reality of instructional theories and situations, non grouping of teachers based on length of service are some of the barriers found through investigations against effective Inservice Training. Take measures for rectifying these and for providing maximum opportunities to enrich the teachers for effective implementation of Instructional Technology.

12. Inservice Teacher Training programmes are to be more collaborative and teacher centered. Collective reflections of teachers during training sections, connection between learning process and outcomes, and pragmatic application of learning and instructional theories in class rooms are sum of the measures significantly be made for effectiveness of Inservice Training Programmes.

13. Provide more decentralised Inservice Teaching Training Programmes that are school based and school focused, and determine their effectiveness.

14. Provide for objective efficient functioning of On Site Support Team. (OSST)

15. Make teachers available of the Instructional Technology Awareness packages published by NCERT, SCERT, DIETs, BRCs, CRCs etc.

16. While arranging programmes, special care may be taken for having programmes on Children with special needs and on Integrated Education for the Disabled Children (IEDC). In these areas, select teachers be trained as Resource Teachers.

5.4. SUGGESTIONS FOR FURTHER RESEARCH

The studies reviewed and the findings of this study led the investigator to suggest the following areas for further research.
1. Replication of the study among Secondary and Higher Secondary School Teachers.

2. A study on the relation of Instructional Technology Awareness with Inservice Training Needs among different levels of Teachers.

3. To workout a Strategic Model of Inservice Training programmes for the enhancement of Instructional Technology Awareness and for its better use.

4. To prepare Instructional Technology Models for the effective transaction of select topics of different levels of Teaching.

5. A study on the relative effect of the five Domains of Instructional Technology on effective instruction.

6. A study of the institutional roles in making Teachers for effective utilisation of Instructional Technology.

7. To frame a Curriculum for Preservice Service Teacher Education aiming at developing competencies in the innovative practices of instruction.