**INSTRUCTIONAL PROBLEMS FACED BY HIGHER SECONDARY SCHOOL**

**TEACHERS**

**JIJI JOSE THACHIL**

**Dissertation**

**Submitted to the University of Calicut**

**in partial fulfilment of the**

**requirements for the degree of**

**MASTER OF EDUCATION**

**FAROOK TRAINING COLLEGE**

**UNIVERSITY OF CALICUT**

**2005**

**D E C L A R A T I O N**

 I, JIJI JOSE THACHIL, do hereby declare that this dissertation, **"INSTRUCTIONAL PROBLEMS FACED BY HIGHER SECONDARY SCHOOL TEACHERS"** has not been submitted by me for the award of any Degree, Diploma, Title or Recognition before.

Farook Training College,

 . .2005. **JIJI JOSE THACHIL**

**ACKNOWLEDGEMENT**

 At the very outset the investigator thanks the most benevolent God who enabled her successfully complete the task.

 The investigator is deeply indebted to Dr. Mumthas N.S., Lecturer in Education, Farook Training College, under whose guidance the present study was conducted. She has been a source of strength and inspiration to the investigator during all the phases of the study.

 The investigator expresses her sincere thanks to Prof. Abdusalam, Principal, Farook Training College, for all the valuable assistance he provided during the study.

 The investigator also expresses her sincere thanks to all the lecturers of the Farook Training College, who have always been helpful to her.

 The investigator is highly thankful to the Heads and Teachers of the higher secondary schools of Kozhikode district who helped her to get reliable data and for the co-operation they extended to make this study a grand success.

 Profoundly thanking Mr. Balu, Bina Photostat, Chenakkal for printing the dissertation.

 The investigator would also like to express her gratitude to friends, classmates and family for their constant encouragement, patience and help in doing this study.

Farook Training College,

 . .2005. **JIJI JOSE THACHIL**

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R E F E R E N C E S

A P P E N D I C E S

**C E R T I F I C A T E**

 I, Dr. Mumthas, N.S., do hereby certify that this dissertation, **"INSTRUCTIONAL PROBLEMS FACED BY HIGHER SECONDARY SCHOOL TEACHERS"** is a record of bonafide study and research carried out by **JIJI JOSE THACHIL**, under my supervision and guidance. The report has not been submitted by her for the award of a Degree, Diploma, Title or Recognition before.

 **Dr. Mumthas, N.S.**

 *(Supervising Teacher)*

Farook Training College, Lecturer in Education (Senior Scale)

 . .2005. Farook Training College.

INTRODUCTION

 National development of a society is closely linked with the system of education of the land. Education has been considered as the most important input for the development of an individual, society and nation. That is, educational institutions provide the foundation on which strong nations are built.

 Education is a process of development from infancy to maturity, process by which a child adopts himself gradually in various ways of his physical and psychological environment. It aims at shaping the behaviour of the students in a desirable way and bringing about all round development in their personality. It helps the students to develop into highly evolved and morally oriented human beings. Thus an effective system of education should invigorate the learner to choose an area of specilisation in which he or she would prefer to pursue his or her potentialities to the fullest extent possible.

 Educational structure in all the countries, at different times of their history is quite important for its educational efforts.

 "Educational structure was differing from time to time during the long history of our country, depending upon:

 1. The needs of the nation.

 2. Requirements and aspiration of educands.

 3. Goals and purpose of education visualized.

 4. The social and cultural background of the country at a given
 point of time" (Murthy, 1986).

 The system of education in Kerala is categorised into four divisions viz., primary education, secondary education, higher secondary education and higher education. Since independence, the law envisages for Higher Secondary education in India. It has a vital contribution towards the preparation of human resource harvestation in the nation. The need to a uniform educational structure came to be increasingly felt by one-and-all concerned with the educational phenomenon. The new pattern of Higher Secondary education was evolved in our country. It is also known as plus two system of education. Higher Secondary education has two streams; academic stream and vocational stream.

 These two streams of education are introduced from the plus two stage of education. Higher Secondary education is a preparatory course for those who want to pursue higher education and terminal course for those who wish to complete their education and enter the world of work by pursuing the vocational stream. In the dawn of Independence we were having Pre University Course, which later became Predegree attached to college. Recently the plus two system of education is provided.

 The manifest functions or widely accepted and intended consequences of this scheme of structural change in school education are:

1. To link education with productivity.

2. To improve the quality of education.

3. To provide such knowledge to the students which is relevant to their actual life as much as possible.

4. To bring about harmonious development of pupils personality (Desai, 1975).

 Higher secondary education plays a significant role in achieving these manifest functions which ultimately helps in improving the quality of education and thereby facilitate for the total development of nation.

# NEED AND SIGNIFICANCE

 The recommendations of different educational commissions and committees especially the recommendation of National Policy on Education (1986), Higher Secondary Course was introduced in Kerala from the year 1990 and there is need to effect changes to make the course purposeful.

 One of the crucial problems haunting the post-independent scenario of the state was the delinking of predegree from the colleges of Kerala and the emerging problems with the inception of higher secondary schools. Though government has made higher secondary education as part of school education, they faced lot of problems during its implementation stage and till now it is not free from the dilemma as it faced in its child age. Without removing these hurdles, government continues adding number to the list of higher secondary schools. Different educational experts, teachers, political parties have expressed their deep concern over the pathetic condition of higher secondary schools due to lack of educational facilities, quality teachers etc.

 Higher Secondary education has an important place in the ladder of education. It is a preparatory course for academically disposed students because it leads to a three year degree course and terminal course serving as a stepping stone to careers in life. Therefore effective instruction should be provided by teachers at this stage. Any difficulty in providing proper instruction will affect the future of students.

 Higher Secondary schools in Kerala are run under different syllabus. Now-a-days a general notion has been formed among the parents that CBSE schools have greater infrastructural facilities when compared to state run schools. This forced the parents to send their children to CBSE schools.

 The strength of our nation depends on the teachers ability to rear highly educated, responsible, well adjusted youth who will step forward when the adult generation passes on to retirement. Teacher plays a major role in moulding younger generation. They should have thorough knowledge of subject matter, new ideas and informations regarding their area of specialisation, use of audio visual aids etc. Faculty improvement programmes, seminars, workshops etc. should be organized for improving their subject competencies. But these are very meagre at higher secondary level. Authorities are silent regarding the need of providing refresher programmes for teachers. This acts as hindrance for the higher secondary school teachers for providing effective instruction to their students. Studies reported that the teachers are facing instructional problems due to lack of effective reference library, sufficient amount of teaching materials, audio visual aids, inservice training programmes etc. (Patil, 1985 and Patnekar, 1998).

 Another crucial problem faced by higher secondary school teachers are related with the examination pattern of plus one classes. Students are taking lesser interest in plus one classes, since their plus one marks are not considered in the final exam and they have no bearing on their admission to higher studies. More attention is diverted to coaching classes.

 The recognition is given to schools by the government as per the stipulated norms in the Kerala Education Rule. But teachers are facing a challenging situation, when the same schools are found bereft of these facilities.

 Teachers' ability alone is not sufficient to mould the destiny of future generation. Besides these, educational institution must have well equipped infrastructural facilities for improving the quality of education. Just like blood is an essential element for the proper functioning of body, infrastructure is a key factor for achieving the educational objectives.

 According to the Kerala Education Rule (Government of Kerala, 1997), educational institutions has well established norms regarding infrastructure. These norms are applicable to higher secondary schools also. Kerala Education Rule directs that there should be separate building for higher secondary section, laboratory for different science subjects, class rooms of adequate size (9 m x 6 m x 3.7 m), additional room for language classes etc. Norms also insist on having sufficient number of computers, necessary audio visual aids, separate laboratory and library assistants, quality playground etc. But most of the higher secondary schools does not have adequate facilities. Studies disclosed that the existing condition of libraries and laboratories are pathetic. The working condition of audio visual aids are very poor and in some government schools, teachers are placed in charge of library (Mittal, 1990 and Urmil, 1994).

 A study conducted in Kerala also reveal that there is positive relationship among three components of a school system. Viz., infrastructure, academic standards and school performance (Moorthy, 1999).

 The investigator from her personal experience also found that many higher secondary schools are confronting with these handicaps which are cited earlier. In the light of these, the present study aims to find out major instructional problems faced by higher secondary school teachers and to know whether these instructional problems differ between teachers according to their teaching experience, locality of the school, type of school management and area of specialisation. An understanding of these instructional problems faced by higher secondary school teachers will help school authorities and government in solving it and thereby help for improvement in the quality of education.

# STATEMENT OF THE PROBLEM

 The problem under study is entitled as "INSTRUCTIONAL PROBLEMS FACED BY HIGHER SECONDARY SCHOOL TEACHERS".

# DEFINITION OF KEY TERMS

**1. Instructional Problems**

 For this study 'Instructional Problems' are the problems faced by the higher secondary school teachers in their instruction. These Problems are related with school location, building and furniture, library, laboratory, academic matters, computers, physical education, audio visual aids etc.

**2. Higher Secondary School Teachers**

 For the present study 'Higher Secondary School Teachers' are the teachers who are teaching at XI, XII classes.

# VARIABLE OF THE STUDY

 The variable of the study is 'Instructional Problems of Higher Secondary School Teachers'.

# OBJECTIVES

 The objectives set forth for the study are the following.

1. To identify the major instructional problems faced by higher secondary school teachers for the total sample and subsamples based on,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

2. To examine whether there is considerable difference in the major instructional problems identified for the higher secondary school teachers based on,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

## HYPOTHESIS

 The hypothesis set for the study was

 There will be considerable difference in the major instructional problems based on ,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

# METHODOLOGY

 Methodology deals with the precise description of sample used for the study, tool and statistical technique used.

**Sample**

 The study was conducted on a sample of 211 teachers drawn from 44 higher secondary schools located in Kozhikode district using stratified sampling technique. The sample was selected by giving due representation to the different strata viz., locale of the school, type of school management, teaching experience and area of specialisation.

# Tool used for the study

 To measure the only variable of the study 'Instructional problems of higher secondary school teachers' the investigator developed a tool viz., "Instructional Problem Inventory for Higher Secondary School Teachers" (2005) in collaboration with the supervising teacher.

# Statistical Technique Used

 Statistical technique used for the analysis of the data is,

 Estimation of Percentages.

# SCOPE AND LIMITATIONS

 The present study is to identify the major instructional problems of higher secondary school teachers. The study was conducted on a sample of 211 teachers of higher secondary schools belonging to 44 educational institutions of Kozhikode district. In selecting the sample due representation was given to all the subsamples viz., locale of the school, type of school management, teaching experience and area of specialisation. Eventhough much precaution were taken to make the study as accurate as possible there are certain limitations also. Some of these are,

1. The sample is selected from government and aided higher secondary schools only. Unaided schools are not included in the sample.

2. The sample of the study is confined to only one district viz., Kozhikode due to time constraint.

3. Only those problems which occured in at least 50% of the sample were considered as major instructional problems.

 Inspite of the above limitations, the investigator has attempted to make the data as objective and valid as possible and hopes that the findings of the study will yield fruitful results. This will be useful to administrators, school authorities, government and others concerned in the field of education.

# ORGANISATION OF THE REPORT

 Chapter I presents a brief introduction of the problem, need and significance of the study, statement of problem, definition of key terms, objectives and hypothesis, methodology, scope and limitations of the study.

 Chapter II presents the conceptual overview of the variable and summary of the related studies.

 Chapter III presents the methodology of the study describing in detail the tool used, selection of the sample, data collection, scoring procedure and statistical technique used for analysis are given.

 Chapter IV presents the statistical analysis of data and discussion of results.

 Chapter V presents the summary of the study, major findings, tenability of hypothesis, educational implications of the study and suggestions for further research.

REVIEW OF RELATED LITERATURE

Review of related literature of the study is an important aspect of an investigation. A proper study of the related literature would enable the investigator to locate and go deep into the problem. Familiar with what is already known and what is still unknown and untested helps the researcher to eliminate the duplication of what has been done and provides useful hypotheses and helpful suggestions for significant investigation (Best & Kahn, 1999).

 In order to get an insight into the conceptual background of the subject of study, related studies was thoroughly reviewed. The result of the review is summarized in this chapter. For convenience, this has been attempted in two sections viz.,

 A. Conceptual Overview

 B. Review of Related Studies

# CONCEPTUAL OVERVIEW

 Teachers play a pivotal role in the effectiveness and success of any system of education. But it is also true that, it is dependent on other crucial factors like adequate infrastructural facilities, teaching learning materials, suitability of curriculum, efficient administrators etc. (Rao, 2004 and Singh, 2005).

 According to the Secondary Education Commission (1952-53), teachers are the pivot of the whole system of education. The commission recommends the need of effective library service in schools and stressed the importance of providing preservice and inservice training programmes for improving the academic standards of teachers. They also made strong recommendations about expansion of laboratory facilities, craft education, dynamic methods of teaching, introduction of audio visual aids in education etc.

 In earlier periods, educational reformers have struggled to make education realistic. They have expressed deep concern over the excessive use of words that carry the shadow of meaning but not the substance. Teaching process must be directed to the learners' natural curiosity and condemned the liberal use of words by teachers. The importance of 'Object method' of teaching in education was recognised by several educationists (Rousseau and Pestalozzi).

 The Education Commission (1964-66) laid special emphasis on improving the professional status of teachers, expansion of educational facilities at all stages of education, production of high quality text books etc. Regarding text books they recommend that text books are the most important aspect for improving the quality of education.

 Fourth revolution in Educational Technology aim at the development of electronics, notably those involving the radio, television, tape recorder, computer etc. (Ashby, 1967). Computer assisted instruction is a powerful tool for the teacher in the instructional process (Sivarajan, 2002).

 National Policy on Education (1968) stressed the need for a radical reconstruction of the educational system in the country. The major areas which received more attention were examination reforms, improving facilities for sports and games, improving teachers' status etc. National Policy on Education (1986) recommends an urgent need for re-orienting content and process of education. They too stressed the importance of media in education, library, inservice training of teachers and qualitative improvement in education.

 Fifth All India Educational Survey (1993) reports that many higher secondary schools do not possess basic infrastructural facilities, adequate equipments in the laboratory, teaching aids, proper furniture in classroom etc.

 The pathetic condition of higher secondary schools due to lack of proper library, laboratory, audio visual aids, computers, sports equipments, etc. has been reported in many newspapers (Malayala Manorama and Mathrubhoomi, 2005). It also reported the urgent need of appointing separate laboratory and library assistants in government schools.

 A school equipped with inadequate physical facilities is not only a health hazard to students but also a hindrance in their learning. Studies reported that there is positive relationship between school facilities and learners achievement (Varghese, 1995 and Singh, 2005). Without adequate infrastructural facilities, even the most efficient principal and teachers will remain handicapped.

# Instructional Problems of Teachers

 'Instructional Problems' are the problems faced by the teachers in their instruction. Usually these problems are related with school location, building and furniture, library, laboratory academic matters, computers, physical education, audio visual aids etc.

# School Location

 Location of the school plays an integral role in effective teaching and learning. A healthy, beautiful and refreshing environment soothes the eye and pleases the soul. "Nothing in the whole educational programme is more conducive to co-operative attitude among the pupils and a love of school than an attractive and wholesome environment (Kochaar, 1988).

# Building & Furniture

 The classrooms should be large enough for good teaching and learning to take place. Every instructional room should provide a healthful living and working environment for students and teachers. Classrooms should have proper electric connection and ventilation and there should be sufficient number of benches and desks to accommodate students. These facilities are necessary to aid teachers in providing proper instruction to students.

# Library

 The library is considered to be the "intellectual laboratory of the school". They are the treasure vault of ideas, the store house of knowledge and the flowing streams of living thought. It facilitates the instructional programme, teaches a skillful use of books, creates an atmosphere conducive to the growth of reading habits, stimulates literary appreciation, provides fruitful social experiences, agency for curriculum enrichment, pupil exploration and dissemination of good literature. It help teachers to keep his knowledge ever fresh and up-to-date. Thus a good library keep the lamp of knowledge burning so as to kindle light in the minds of students and teachers.

# Laboratory

 Laboratories provide help in making activity dominated teaching more successful. Through laboratory work adequate interest is created in the subjects of study concerned and very useful for effective teaching. Therefore the school should possess well planned and equipped rooms for laboratory to aid instruction. Language laboratory enables teachers and students to speak with correct intonation, pronunciation, accent and fluency. It relieves the teacher of endless repetitions of patterns and can devote more time and energy to meet the particular needs of individual students. Thus laboratory helps students to learn by first hand observation, independent thinking and enhance problem solving skills.

# Academic Matters

 "The teachers act as the pivot for the transmission of intellectual traditions and technical skill from generation to generation and helps to keep the lamp of civilization burning" (Kochaar, 1988). Therefore teachers should have some technical know how of the latest methods of teaching, new educational trends and researches, effective use of audio visual aids etc. This creates the necessity of organizing inservice training programmes in schools. Teachers face difficulty due to overloaded curriculum, lack of clear cut directions and guidance, lack of remuneration for remedial coaching classes etc. But many schools are not in a position to provide refresher programmes, extra remuneration for remedial coaching classes etc. This acts as a barrier in their effective teaching – learning process.

# Computer

 Computers have excellent applications in the classroom and can be time saving devices to teach concepts. Machines give relief from the more mechanical aspects of the teacher's work. Teachers need no longer be 'talking books' or 'paper correcting automations'. They can work in other areas which need special guidance to students. Teachers can enhance their audio-visual presentations, access to new form of informations etc. But most of the educational institutions does not have well equipped computer rooms and sufficient number of computers. Hence teachers face difficulty in improving the quality of students and enlarging their knowledge.

# Physical Education

 "The aim of physical education is not to produce those who are masses of brawn and muscle, but little else. Nor it is to produce experts in various branches of sports and athletics. It is to produce an integrated and harmoniously developed personality" (University Education Commission, 1948). Schools are the preparation ground for the future world. So every school should provide adequate physical education facilities to the students for the motor and sensory development. But the present position of physical education in schools are not satisfactory. Therefore effective physical education programmes should be organized in schools.

# Audio Visual Aids

 Audio visual aids can make presentation of topic more interesting, dynamic and effective. Learning can be reinforced with teaching aids of different variety because they stimulate, motivate as well as arrest learners attention during the instructional process. A good teaching always aims at the effective communication and appropriate learning outcomes. For realizing these objectives, a teacher has to make use of different type of audio visual aids.

# REVIEW OF RELATED STUDIES

 The reviewed studies are abstracted below.

 Pratap (1973) tried to assess the facilities available in schools of Andhra Pradesh. The sample consisted of 31 schools and data were collected through questionnaire and discussions with the teacher. The study reported that majority of the schools did not have adequate accommodation, teaching aids and furniture. Many of the school buildings were not in good shape. Some of the schools were conducting classes under trees.

 Shukla (1978) aimed to find out the differences in physical facilities in secondary and higher secondary schools with low and high academic performance. The sample comprised of teachers and students. The investigator found out that physical facilities in high performance schools in terms of school building, library, equipments were superior to those in low performance schools.

 Muddu (1978) visualised the problems actually faced by biology teachers at the secondary school level and factors which acted as constraints in the way of effective teaching. The findings were (i) majority of teachers stated that they did not have adequate classroom facilities. (ii) most of the teachers are over burdened with workload. (iii) in most of the schools, teachers were experiencing inadequate laboratory facilities (iv) film strips, microscopes, insect cages were not adequately available for biology teaching.

 Arunajatal (1979) tried to identify the factors contributing to the efficiency of secondary school. The sample consisted of 100 schools in Tamil Nadu. The findings were (i) most of the schools have inadequate physical facilities like buildings, furniture and classrooms (ii) the schools have shortage of sports equipments and sufficient space for playground.

 Government Central Pedagogical Institute (1981) studied the existing conditions of the libraries of government higher secondary schools in Uttarpradesh. The findings were (i) the conditions of the libraries in the government higher secondary schools was not satisfactory (ii) the buildings were insufficient and equipments were inadequate (iii) there were no separate reading rooms.

 Tali (1984) tried to identify the problems faced by teachers pertaining to various aspects of teaching profession. A checklist was constructed and data were collected from 366 teachers in 57 high schools. The investigator reported that better infrastructural facilities should be provided for improving the academic performance of students.

 Bavakutty (1984) reported that in majority of the colleges, the traditional practice of placing a teacher in charge of library as a control over the librarian was in evidence. Physical facilities of libraries were very poor with only 24 percent having separate buildings. Only a small percentage of teachers and librarians were satisfied with the condition of libraries.

 Patil (1985) conducted an inquiry into the conditions of teaching geography in the rural secondary schools of Solapur district. Main objective of the study was to study the methods and techniques followed in the teaching of Geography and to study the existing facilities available for teaching geography in rural secondary schools. The investigator found that no facility of a geography room was available in a large number of schools and the teaching aids were inadequate.

 Gupta (1985) conducted a study on the administrative procedures and problems of training colleges in Maharashtra. The investigator found that training colleges were confronted with problems of lack of space, classrooms and laboratories which led to a poor standard of teacher education programme.

 Antwi (1987) conducted a study on "The state of development of training college libraries in Ghana". The study pointed out that most of the libraries lack suitable accommodation, equipments and furniture.

 Jehan *et al*., (1988) in his studies, compared the problems experienced by secondary school teachers under different managements in Andhrapradesh and their impact on performance of students. The major findings were (i) there were marked differences in the infrastructural facilities in the schools under different management. (ii) Private schools were in a much better condition than government schools.

 Mittal (1990) tries to find out the position of school buildings in secondary and higher secondary schools in the four selected states viz., Bihar, Karnataka, Madhyapradesh and Himachal Pradesh. The investigator found that the schools in all the four states had poor buildings, inadequate ventilation and lighting facility. Quite an alarming percentage of schools did not possess separate library rooms and there were no science laboratories at all in schools of Himachal Pradesh, Karnataka and Madhya Pradesh.

 Mohapatra (1991) investigated the problems of secondary school teachers in the comparitive perspective of government and private school in the Cuttack district. A sample of 100 teachers each from government and private schools were chosen. The findings were (a) the classrooms of both government and private schools are found to be overcrowded. (b) the infrastructural facilities such as library, laboratory with equipments were found to be better provided in government schools than in private schools.

 Govinda and Varghese (1991) conducted a study "The quality of basic education services in India, a case study of the primary schools in Madhyapradesh." The sample for the study were 59 schools, 111 teachers and 2159 learners respectively. Major findings were (I) the level of infrastructural facilities provided in the school played an important role in improving the teaching learning environment. (ii) better physical facilities specially in terms of teaching aids and equipments were found desirable for good results.

 Matto *et al*., (1992) studied the problems of teachers in single teachers and two teacher primary schools. The sample for study comprised of 642 teachers of primary schools. The findings were (i) most of the single or two teacher primary schools lacked physical and educational facilities like school buildings, furniture, library facilities, black boards, chalk etc. (ii) the classrooms were over crowded and of inadequate size.

 Biswas (1993) studied the status of facilities for physical education and availability of play materials in the schools of Arunachal Pradesh. The investigator reported that none of the schools provided with the sport equipments like volleyball, rubber ball etc.

 Urmil (1994) conducted a study on the availability of audio visual aids in secondary schools of Gujarat state. The data was collected through the questionnaire from teachers of secondary schools. The non government secondary schools are rich than that of government secondary schools in field of audiovisual aids. The study also revealed about the poor working condition of audio visual aids and limited items of audio visual aids such as maps, graphs, microscopes etc.

 Varghese (1995) tried to study about the school facilities and learner achievement. The sample comprised of 43 government schools, 8 aided private schools and 8 private unaided schools selected from five localities of Madhyapradesh. The findings were (i) out of 150 schools included in the sample, 10 were categorised as having no building, 28 were having poor infrastructure, 14 were classified as good and 7 were considered as very good facility schools. (ii) of the 43 government schools, 37 schools had either poor facility or no facility. (iii) of the 16 private schools, 15 schools has either good facility or very good facility.

 Kumar (1997) in the study "problems of school libraries in the present day education" traced the attention of present scenario of libraries in secondary educational system. The study reported that infrastructural facilities provided in the school libraries were insufficient.

 Patnekar (1998) conducted a critical study of the problems of teaching Hindi in the secondary schools of Goa. The major findings were (i) 97 percent of schools have neither news papers nor magazines in Hindi in the school library. (ii) Inservice training is inadequate for Hindi teachers.

Moorthy (1999) investigated the inter relationship between three important components of a school system, viz., infrastructure, academic standards and performance. A total of 23 schools in the coastal highway belts of Alappuzha – Ernakulam districts of Kerala formed the sample of study. The data were gathered from the teachers, head masters and students. The major findings were (i) a good number of schools in the region lack adequate land area. (ii) only two schools could claim pucca construction while remaining 14 schools have semi pucca staff rooms. (iii) there were eight schools having a separate library room and remaining schools did not have this facility. (iv) teaching aids in most of the schools are insufficient (v) slightly over half of the schools have laboratories for the benefit of their students.

 Roy and Uma (1999) studied the educational problem of high school students in West Garo Hills District of Meghalaya. The findings were (i) majority of students had tensions due to overloaded syllabus (ii) the infrastructure in schools provided by school authorities was inadequate. (iii) library facilities were insufficient in the schools.

 Sadiq (1999) conducted a study on library facilities and its utilization by teachers in teacher training colleges. The major findings were (I) 33.33% teachers stated that there is inadequacy of subject periodicals in the library (ii) 51% teachers pointed about the lack of proper infrastructural facilities in the school library. (iii) 8.33% teachers referred to the inadequacy of reference books in school libraries.

 Gafoor (1999) tried to study about the availability and utilisation of school library facilities in the secondary schools of Malappuram educational district. The study found that many of government schools does not have separate specified rooms for library. The study also revealed that physical facilities such as ventilation, shelves, benches, desks available in secondary schools of Malappuram educational district are not satisfactory.

 Singh (2003) conducted a study on "School education in North Eastern India: Issue and prospects". The major findings were (i) libraries are in bad shape. (ii) educational facilities have to be improved.

 Rao (2004) conducted a study on the "Relation between physical facilities, teacher facility and academic attainment in Municipal secondary schools". The findings were (i) academic achievement of students depends largely on the availability of physical, human and other infrastructural facilities in schools (ii) most of the Municipal schools do not have proper buildings, classrooms and are also short of many facilities like proper ventilation, furniture, good black boards, etc. (iii) no proper library for referring source materials and no well equipped laboratory in all the Municipal secondary schools.

# Conclusion

 The above review of studies gave a wide perspective of the present problem under study. Moreover, by reviewing related studies the investigator could identify the possible problems of higher secondary school teachers in their instruction. These problems were related with school location, building and furniture, library, laboratory, academic matters, computers, physical education, audio visual aids etc. Most of the studies related to the present study have been conducted outside Kerala state. This inspired the investigator to undertake the present study.

METHODOLOGY

 Methodology finds a major place in any type of research work and it is a collection of well defined procedures in which a problem is identified and followed up till its final edge. A proper selection of research design makes the work half done. The research method properly selected act as a powerful beacon to the investigator in any situation which he encounters, during the course of research.

 The methodology of the study is presented under the following sections.

 A. Variable

 B. Objectives

 C. Hypothesis

 D. Tool used for collection of data.

 E. Sample selected for the study.

 F. Data collection procedure, scoring and consolidation of data.

 G. Statistical Technique used for Analysis of data.

 The details of each of the above is given below.

**A. VARIABLE**

 As the purpose of the study is to trace out the instructional problems faced by the higher secondary school teachers, the variable of this study is 'Instructional Problems of Higher Secondary School Teachers".

**B. OBJECTIVES**

 The objectives setforth for the study are the following:

1. To identify the major instructional problems faced by higher secondary school teachers for the total sample and sub samples based on,

 (i) Locale of the school

 (ii) Type of school management

 (iii) Teaching experience

 (iv) Area of specialisation

2. To examine whether there is considerable difference in the major instructional problems identified for the higher secondary school teachers based on,

 (i) Locale of the school

 (ii) Type of school management

 (iii) Teaching experience

 (iv) Area of specialisation

**C. HYPOTHESIS**

 The hypothesis set forth for the study was

There will be considerable difference in the major instructional problems based on

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

**D. TOOL USED FOR COLLECTION OF DATA**

 For the present study, the investigator developed a tool 'Instructional Problem Inventory for Higher Secondary School Teachers' in consultation with the supervising teacher.

**Instructional Problem Inventory**

 The inventory is prepared by the investigator in consultation with teachers, other experts and educationists. By doing so the investigator could identify the different areas of problems faced by higher secondary school teachers in relation to their instructional process. The problem areas so identified are related to school location, buildings and furniture, library, laboratory, academic matters, computer, physical education, audio visual aids etc. Then a pilot study was conducted to have a clear cut idea about the instructional problems faced by higher secondary school teachers in each of these areas. For this purpose, 30 teachers teaching different subjects in higher secondary classes were requested to list out the problems they are feeling under the specified areas.

 Based on the information obtained from the pilot study, the investigator developed an 'Instructional Problems Inventory' consisting of 58 items. These 58 items belongs to eight major problem areas, each one of which is described below.

**1. School location**

 This include problems related to the locality of school. In this area there are 2 items (item numbers 1, 2).

1. School is in noisy area (item no.2)

**2. Building and Furniture**

 This include the problems like lack of adequate number of classrooms, lack of adequate number of benches and desks, lack of building of proper construction etc. In this area there are 12 items (item numbers 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 and 14).

*Examples*:

1. Non-availability of separate staff room for higher secondary section (item no.12).

2. Lack of adequate number of benches and desks in classroom for students (item no.13).

**3. Library**

 Problems like non-availability of separate library for higher secondary section, lack of sufficient number of reference books, magazines, journals, news papers etc. are included in this area. In this area there are 12 items (item numbers 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 and 26).

*Examples*:

1. Lack of separate reading room (item no. 21)

2. Lack of purchase of books, journals etc. demanded by teachers (item no.24).

**4. Laboratory**

 This include problems such as lack of separate laboratory for higher secondary section, inadequacy of laboratory equipments for different science subjects etc. In this area there are 10 items (item numbers 27, 28, 29, 30, 31, 32, 33, 34, 35, and 36).

*Examples*:

1. Inadequate quantity of consumables in laboratory (item no.30).

2. No separate laboratory assistant (item no.33).

**5. Academic matters**

 Problems related to academic matters such as overloaded curriculum, lack of clear-cut directions from the authority for executing projects etc. are included in this area. In this area there are 9 items (item numbers 37, 38, 39, 40, 41, 42, 43, 44, and 45).

*Examples*

1. Lazy nature of students in the plus one classes due to the exemption of plus one marks from final public examination (item no.39).

2. Lack of provision for teachers to participate in refresher programmes (item no. 41).

**6. Computer**

 This include problems like lack of separate computer room for higher secondary section, lack of fully qualified computer teacher etc. In this area there are 5 items (item numbers 46, 47, 48, 49 and 50).

*Examples*:

1. Lack of well equipped computer room (item no.47).

2. Lack of special training for teachers those who are handling computer (item no.50).

**7. Physical Education**

 Problems like lack of sufficient periods for physical education, lack of adequate sports materials etc. are included in this section. In this area there are 4 items (item numbers 51, 52, 53 and 54).

*Examples*:

1. Non-availability of quality playground (item no.53).

2. Lack of separate physical education teacher (item no.54).

**8. Audio Visual Aids**

 This include problems like lack of necessary audio visual aids for classroom instruction, lack of quality chalk board etc. In this area there are 4 items (item numbers 55, 56, 57 and 58).

*Examples*:

1. Lack of quality chalkboard (item no.56)

2. Lack of adequate number of study aids (item no.57).

 Since most of the problems listed by the teachers during pilot study belong to the areas viz., library, academic matters, laboratory, the investigator gave emphasis on these problem areas. The number of items in each of the eight areas are given in Table 1.

TABLE 1
**Number of items in Eight Problem Areas**

|  |  |
| --- | --- |
| Areas | No. of items |
| School Location | 2 |
| Building & Furniture | 12 |
| Library | 12 |
| Laboratory | 10 |
| Academic matters | 9 |
| Computer | 5 |
| Physical Education | 4 |
| Audio visual Aids | 4 |

**Scoring**

 There were two choices for each item in the inventory viz., 'Yes' and 'No'. The teachers are requested to read each item carefully and if a particular item is a problem for them, put a tick mark in the column against that particular item; otherwise put a cross mark. Then the tick marks given under the choice were considered as one problem.

**Reliability**

 Reliability of a test refers to its consistency. Otherwise reliability ensures degree to which a test agrees with itself. Reliability is usually expressed as co-efficient, but sometimes it is expressed as a standard of measurement (Best, 1973).

 The investigator established the reliability of the present inventory by using test-retest method. The time interval between the first and second administration was two weeks. The test-retest was conducted among 30 teachers. A cross examination of the responses showed that there is not much wide variations in the responses which suggests that there is high degree of consistency in the responses.

**Validity**

 Validity is that quality of a data gathering instrument or procedure that enables it to measure what it is supposed to measure (Best & Kahn, 1993).

 The validity for the present inventory was ensured using face validity. A test is said to have face validity when it appears to measure whatever the author had in mind, namely, what he was thought he was measuring (Garrett, 1973). The items in the present inventory were phrased in the least ambiguous way and the meaning of all terms were clearly defined. The inventory was administered to a try out sample of 30 teachers. It was found that the subject comprehended the inventory clearly and responded to the items without misunderstanding the items. The inventory thus possess face validity.

**E. SAMPLE SELECTED FOR THE STUDY**

 A sample may be defined as 'finite number of observations or cases, selected from all areas in a particular universe, often assumed to be representative of the total group or universe of which it is a part' (Good, 1973).

 The population under the present study is teachers at higher secondary level. The sample for the present study constituted 211 teachers drawn from 44 higher secondary schools of Kozhikode district using stratified sampling technique. The different strata considered in the population are,

 1. Locale of the School

 2. Type of School Management

 3. Teaching Experience

 4. Area of Specialisation

**1. Locale of the School**

 Since the number of educational institutions in rural area were more than the number of educational institutions in urban area (Sixth All India Educational Survey, 1998) the investigator decided to give due weightage for educational institutions in rural area.

**2. Type of School Management**

 The existing institutions in Kerala fall into two broad categories as government and private. Since there are more private schools than government schools it was decided to give due weightage to private schools.

**3. Teaching Experience**

 In our school system, teachers differ in their teaching experience and their nature of job. For the present study, the teachers were classified into three categories viz., guest teachers, teachers with below ten years experience and teachers with more than ten years experience.

**4. Area of Specialisation**

 The curriculum of higher secondary schools consists of three major divisions – science, arts and commerce. So the investigator decided to take the batches as arts, science and commerce. While considering the area of specialisation, due representation were given to each branch. The details of the final sample are given in Table 2.

TABLE 2
**Break-up of the Sample**

|  |  |  |  |
| --- | --- | --- | --- |
| Locale of the School | Type of School Management | Teaching Experience | Area of Specialisation |
| Rural | Urban | Govt. | Private | Guest  | Below ten years | Above ten years | Arts | Science | Commerce |
| 126 | 85 | 91 | 120 | 39 | 122 | 50 | 88 | 87 | 36 |
| 211 | 211 | 211 | 211 |

The list of institutions from which the investigator collected the data needed for the study are appended as Appendix II.

**F. DATA COLLECTION PROCEDURE, SCORING AND CONSOLIDATION OF DATA**

**Administration of Tool**

 After the selection of the sample the investigator contacted the heads of the concerned schools and obtained their permission for collecting data. The investigator met the individual teachers and explained the nature and confidentiality of the study and made them confessed. After providing necessary instruction copies of the tool were distributed and collected back.

**Scoring and Consolidation of Data**

 After scoring, the investigator prepared a tabulation sheet and data was scored as per the scoring key. The scores obtained were consolidated and tabulated for further analysis.

**G. STATISTICAL TECHNIQUE USED FOR ANALYSIS**

 The objectives and hypothesis of the study required the use of the following statistical technique.

**1. Estimation of Percentages**

Percentage is used for identifying major instructional problems for total sample and relevant subsamples.

ANALYSIS

Analysis of data collected helps the investigator to test the hypothesis formulated statistically and arrive at conclusions. The analysis of data has been done keeping in view the objectives of the study stated below:

1. To identify the major instructional problems faced by higher secondary school teachers for the total sample and subsamples based on,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

2. To examine whether there is considerable difference in the major instructional problems identified for the higher secondary school teachers based on

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

 The analysis of the data and discussion of result are described under following heads.

A. Identification of major instructional problems of teachers teaching at higher secondary level.

B. Identification of major instructional problems of higher secondary school teachers based on locale of the school, type of school management, teaching experience and area of specialisation.

A. IDENTIFICATION OF MAJOR INSTRUCTIONAL PROBLEMS OF TEACHERS TEACHING AT HIGHER SECONDARY LEVEL

 This section of the analysis was done to find out the major instructional problems of teachers teaching at higher secondary level.

 As the first step of analysis the investigator calculated the percentage of occurrence of each problem in the total sample. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the higher secondary school teachers in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 3.

TABLE 3

**Rank and Percentage of Occurrence of
Problems of Higher Secondary School Teachers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 36 | 30 | 57.81 | 47 |
| 2 | 95.26 | 21 | 31 | 57.34 | 34 |
| 3 | 94.31 | 23 | 32 | 57.34 | 35 |
| 4 | 93.83 | 4 | 33 | 55.92 | 37 |
| 5 | 92.41 | 41 | 34 | 53.08 | 33 |
| 6 | 90.99 | 54 | 35 | 52.60 | 18 |
| 7 | 90.52 | 19 | 36 | 52.13 | 32 |
| 8 | 90.04 | 20 | 37 | 50.71 | 25 |
| 9 | 89.09 | 16 | 38 | 49.76 | 30 |
| 10 | 86.72 | 58 | 39 | 48.81 | 13 |
| 11 | 85.78 | 22 | 40 | 47.86 | 53 |
| 12 | 82.93 | 24 | 41 | 46.44 | 3 |
| 13 | 81.51 | 17 | 42 | 45.97 | 31 |
| 14 | 81.04 | 38 | 43 | 45.02 | 29 |
| 15 | 80.56 | 42 | 44 | 44.54 | 56 |
| 16 | 79.62 | 39 | 45 | 43.60 | 14 |
| 17 | 76.77 | 15 | 46 | 39.81 | 43 |
| 18 | 73.93 | 40 | 47 | 37.91 | 1 |
| 19 | 72.98 | 52 | 48 | 37.91 | 45 |
| 20 | 72.98 | 51 | 49 | 36.01 | 7 |
| 21 | 72.51 | 5 | 50 | 35.54 | 2 |
| 22 | 70.14 | 28 | 51 | 32.22 | 27 |
| 23 | 67.29 | 26 | 52 | 30.33 | 6 |
| 24 | 66.82 | 57 | 53 | 28.90 | 46 |
| 25 | 66.82 | 11 | 54 | 25.11 | 49 |
| 26 | 66.35 | 48 | 55 | 21.80 | 12 |
| 27 | 63.03 | 9 | 56 | 18.95 | 44 |
| 28 | 60.18 | 55 | 57 | 18.48 | 50 |
| 29 | 59.71 | 10 | 58 | 13.27 | 8 |

 Table 3 shows that in the sample the highest percentage of occurrence of problem is 100 (item no.36) and the second highest percentage is 95.26 (item no.21) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the teachers working in higher secondary schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of total sample is a major one. By putting such a criteria, from the Table 3, the investigator could identify 37 problems as the major instructional problems felt by the teachers working in higher secondary schools. These 37 problems are listed below according to their rank of seriousness.

1. Lack of language laboratory.

2. Lack of separate reading room.

3. Lack of separate librarian.

4. Lack of additional room for language classes.

5. Lack of provision for teachers to participate refresher programmes.

6. Lack of separate physical education teacher.

7. Inadequate room size for library.

8. Improper ventilation and lighting in library.

9. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects.

10. Non-availability of necessary audio visual aids such as OHP, slide projector etc.

11. Lack of separate seating arrangements for teachers.

12. Lack of purchase of books, journals etc. demanded by teachers.

13. Inadequate number of general books.

14. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

15. Lack of opportunity for providing real experience to students.

16. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

17. Non-availability of separate library for higher secondary section.

18. Lack of clearcut directions from the authority for executing projects, seminars etc.

19. Lack of sufficient sports materials like volleyball, football etc.

20. Lack of sufficient number of periods for physical education.

21. Lack of classrooms of prescribed norms.

22. Lack of adequate room size for laboratory.

23. Lack of provision for taking books to home by students.

24. Lack of adequate number of study aids.

25. Classrooms without roofs impervious to heat.

26. Computers without internet connection.

27. Classrooms without proper electric connection.

28. Lack of necessary appliances for teaching crafts.

29. Classrooms without proper ventilation.

30. Lack of well equipped computer room.

31. Lack of fully qualified laboratory assistant.

32. Improper maintenance of laboratory.

33. Overloaded curriculum.

34. No separate laboratory assistant.

35. Inadequacy of handbooks and source books of concerned subjects.

36. Inadequacy of work shelves and work tables in the laboratory.

37. Lack of provision for taking books to home by teachers.

 The area wise distribution of these 37 major instructional problems of higher secondary school teachers are presented in Table 4.

TABLE 4

**Area wise Distribution of
Major Instructional Problems of Higher Secondary School Teachers**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 5 | 4, 21, 25, 27, 29 |
| Library | 12 | 2, 3, 7, 8, 9, 11, 12, 13, 17, 23, 35, 37 |
| Laboratory | 6 | 1, 22, 31, 32, 34, 36 |
| Academic Matters | 6 | 5, 14, 15, 16, 18, 33 |
| Computer | 2 | 26, 30 |
| Physical Education | 3 | 6, 19, 20 |
| Audio Visual Aids | 3 | 10, 24, 28 |

 From Table 4 it can be seen that out of the major 37 instructional problems 12 problems are related with the library, 6 problems are related with laboratory, 6 problems are related with academic maters, 5 problem are related with building and furniture, 3 problems are related with physical education, 3 problems are related with audio visual aids, 2 problems are related with computer and there is no item related with school location. That is out of 37 major instructional problems 32.4% are related with library, 16.2% each are related with academic matters and laboratory, 13.6% are related with building and furniture, 8.1% each are related with physical education and audio visual aids and only 5.4% are related with computer. The area wise distribution of the major instructional problems of higher secondary school teachers is presented in Figure. 1.



**FIGURE-1 Area-wise Distribution of Major Instructional Problems of Higher Secondary School Teachers**

**B. IDENTIFICATION OF MAJOR INSTRUCTIONAL PROBLEMS OF HIGHER SECONDARY SCHOOL TEACHERS BASED ON LOCALE OF THE SCHOOL, TYPE OF SCHOOL MANAGEMENT, TEACHING EXPERIENCE AND AREA OF SPECIALISATION**

I. Identification of Major Instructional Problems of Higher Secondary School Teachers Based on Locale of the School

***(a) Teachers working in rural schools***

 Here the investigator calculated the percentage of occurrence of each instructional problem of teachers working in rural higher secondary schools. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the teachers working in rural higher secondary schools in the order of their seriousness. The rank of each item (problem) in the inventory and its percentage of occurrence are presented in Table 5.

TABLE 5

**Rank and Percentage of
Occurrence of Problems of Higher**

**Secondary School Teachers working in Rural Schools**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 36 | 30 | 59.52 | 18 |
| 2 | 99.20 | 23 | 31 | 59.52 | 37 |
| 3 | 97.61 | 54 | 32 | 58.52 | 34 |
| 4 | 96.82 | 21 | 33 | 57.93 | 47 |
| 5 | 96.03 | 20 | 34 | 54.16 | 30 |
| 6 | 95.23 | 4 | 35 | 53.96 | 9 |
| 7 | 94.44 | 19 | 36 | 53.17 | 32 |
| 8 | 93.65 | 16 | 37 | 51.58 | 33 |
| 9 | 92.85 | 41 | 38 | 50.00 | 25 |
| 10 | 92.06 | 22 | 39 | 48.41 | 29 |
| 11 | 92.06 | 58 | 40 | 47.61 | 13 |
| 12 | 86.50 | 24 | 41 | 46.82 | 56 |
| 13 | 83.33 | 15 | 42 | 45.23 | 31 |
| 14 | 82.53 | 42 | 43 | 43.65 | 14 |
| 15 | 81.74 | 38 | 44 | 42.06 | 3 |
| 16 | 81.74 | 17 | 45 | 41.26 | 53 |
| 17 | 79.36 | 39 | 46 | 39.88 | 6 |
| 18 | 76.19 | 5 | 47 | 38.88 | 7 |
| 19 | 74.60 | 40 | 48 | 38.09 | 27 |
| 20 | 73.80 | 57 | 49 | 38.09 | 43 |
| 21 | 71.42 | 52 | 50 | 32.50 | 45 |
| 22 | 70.63 | 51 | 51 | 30.15 | 46 |
| 23 | 69.84 | 11 | 52 | 26.98 | 2 |
| 24 | 69.04 | 26 | 53 | 26.19 | 1 |
| 25 | 69.04 | 28 | 54 | 26.19 | 44 |
| 26 | 66.66 | 10 | 55 | 22.22 | 49 |
| 27 | 66.66 | 48 | 56 | 18.25 | 50 |
| 28 | 63.49 | 35 | 57 | 17.46 | 12 |
| 29 | 62.69 | 55 | 58 | 15.87 | 8 |

 Table 5 shows that in the sample the highest percentage of occurrence of problem is 100 (item no.36) and the second highest percentage is 99.20 (item no.23) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by teachers working in rural schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 5, the investigator could identify 38 problems as major instructional problems felt by the teachers working in rural higher secondary schools. These 38 problems are listed below according to their rank of seriousness.

1. Lack of language laboratory

2. Lack of separate librarians

3. Lack of separate physical education teacher

4. Lack of separate reading room

5. Improper ventilation and lighting in library

6. Lack of additional room for language classes

7. Inadequate room size for library.

8. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects.

9. Lack of provision for teachers to participate in refresher programmes.

10. Lack of separate seating arrangements for teachers.

11. Non-availability of necessary audio visual aids such as OHP, slide projector etc.

12. Lack of purchase of books, journals etc. demanded by teachers.

13. Non-availability of separate library for higher secondary section.

14. Lack of opportunity for providing real experience to students.

15. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public examination.

16. Inadequate number of general books.

17. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

18. Lack of class rooms of prescribed norms.

19. Lack of clear cut directions from the authority for executing projects, seminars etc.

20. Lack of adequate number of study aids.

21. Lack of sufficient sports materials like volleyball football etc.

22. Lack of sufficient number of periods for physical education.

23. Classrooms without roof impervious to heat.

24. Lack of provision for taking books to home by students.

25. Lack of adequate room size for laboratory.

26. Classrooms without proper ventilation.

27. Computers without internet connection.

28. Improper maintenance of laboratory.

29. Lack of necessary appliances for teaching crafts.

30. Inadequacy of hand books and source books of concerned subjects.

31. Overloaded curriculum.

32. Lack of fully qualified laboratory assistant.

33. Lack of well equipped computer room.

34. Inadequate quantity of consumables in laboratory

35. Classrooms without proper electric connection.

36. Inadequacy of work shelves and work tables in laboratory.

37. No separate laboratory assistant.

38. Lack of provision for taking books to home by teachers.

The area wise distribution of these 38 major instructional problems are presented in Table 6.

TABLE 6

**Area wise Distribution of Major Instructional
Problems of Higher Secondary School Teachers working in Rural schools**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 5 | 6, 18, 23, 26, 35 |
| Library | 12 | 2, 4, 5, 7, 8, 10, 12, 13, 16, 24, 30, 38 |
| Laboratory | 7 | 1, 25, 28, 32, 34, 36, 37 |
| Academic Matters | 6 | 9, 14, 15, 17, 19, 31 |
| Computer | 2 | 27, 33 |
| Physical Education | 3 | 3, 21, 22 |
| Audio Visual Aids | 3 | 11, 20, 29 |

 From Table 6 it can be seen that out of the major 38 instructional problems 12 problems are related with library, 7 problems are related with laboratory, 6 problems are related with academic matters, 5 problems are related with building and furniture, 3 problems are related with physical education, 3 are related with audiovisual aids, 2 problems are related with computer and there is no item related with school location. That is out of 38 major instructional problems 31.6% are related with library, 18.4% are related with laboratory, 15.8% are related with academic matters, 13.2% are related with building and furniture, 7.9% each are related with physical education and audiovisual aids and only 5.2% are related with computer. The area wise distribution of the major instructional problems of higher secondary school teachers working in rural schools is presented in Figure 2.



**FIGURE-2 Area wise Distribution of Major Instructional Problems of Higher Secondary School Teachers** **working in Rural Schools**

**b. Teachers working in urban schools**

 Here the investigator calculated the percentage of occurrence of each instructional problem of teachers working in urban higher secondary schools. Then the instructional problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the teachers working in urban higher secondary schools in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 7.

TABLE 7

**Rank and Percentage of
Occurrence of Problems of Higher**

**Secondary School Teachers working in Urban Schools**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 36 | 30 | 55.29 | 1 |
| 2 | 98.82 | 23 | 31 | 54.11 | 34 |
| 3 | 92.94 | 21 | 32 | 53.94 | 26 |
| 4 | 91.76 | 41 | 33 | 52.94 | 3 |
| 5 | 91.76 | 4 | 34 | 52.94 | 9 |
| 6 | 84.70 | 19 | 35 | 52.58 | 32 |
| 7 | 82.17 | 16 | 36 | 51.76 | 25 |
| 8 | 81.17 | 54 | 37 | 50.58 | 13 |
| 9 | 81.17 | 20 | 38 | 50.58 | 37 |
| 10 | 80.17 | 17 | 39 | 49.41 | 10 |
| 11 | 80.00 | 38 | 40 | 48.23 | 2 |
| 12 | 80.00 | 39 | 41 | 48.23 | 35 |
| 13 | 77.64 | 24 | 42 | 47.05 | 30 |
| 14 | 77.64 | 42 | 43 | 47.05 | 31 |
| 15 | 76.47 | 22 | 44 | 45.88 | 45 |
| 16 | 76.47 | 51 | 45 | 43.52 | 14 |
| 17 | 75.29 | 52 | 46 | 42.35 | 18 |
| 18 | 72.94 | 40 | 47 | 42.35 | 43 |
| 19 | 67.08 | 28 | 48 | 41.17 | 56 |
| 20 | 67.06 | 5 | 49 | 40.00 | 29 |
| 21 | 67.05 | 58 | 50 | 31.76 | 7 |
| 22 | 66.05 | 15 | 51 | 29.41 | 49 |
| 23 | 62.50 | 11 | 52 | 27.05 | 46 |
| 24 | 58.64 | 48 | 53 | 23.52 | 27 |
| 25 | 57.64 | 47 | 54 | 18.82 | 50 |
| 26 | 57.64 | 53 | 55 | 16.47 | 6 |
| 27 | 56.47 | 55 | 56 | 16.47 | 12 |
| 28 | 56.47 | 57 | 57 | 9.41 | 8 |
| 29 | 55.29 | 33 | 58 | 8.23 | 44 |

 Table 7 shows that in the sample the highest percentage of occurrence of problem is 100 (item no.36) and the second highest percentage is 98.82 (item no.23) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the teachers working in urban higher secondary schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 7, the investigator could identify 38 problems as major instructional problems felt by the teachers working in urban higher secondary schools. These 38 problems are listed below according to their rank of seriousness.

1. Lack of language laboratory

2. Lack of separate librarian

3. Lack of separate reading room

4. Lack of provision for teachers to participate in refresher programmes.

5. Lack of additional room for language classes.

6. Inadequate room size for library.

7. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects.

8. Lack of separate physical education teacher.

9. Improper ventilation and lighting in library.

10. Inadequate number of general books.

11. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

12. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

13. Lack of purchase of books, journals etc. demanded by teachers.

14. Lack of opportunity for providing real experience to students.

15. Lack of separate seating arrangements for teachers.

16. Lack of sufficient number of periods for physical education.

17. Lack of sufficient sport materials like volleyball, football etc.

18. Lack of clear cut directions from the authority for executing projects, seminars etc.

19. Lack of adequate room size for laboratory.

20. Lack of classrooms of prescribed norms.

21. Non-availability of necessary audio visual aids such as OHP, slide projector etc.

22. Non-availability of separate library for higher secondary section.

23. Classrooms without roofs impervious to heat.

24. Computers without internet connection.

25. Lack of well equipped computer room.

26. Non-availability of quality play ground

27. Lack of necessary appliances for teaching crafts.

28. Lack of adequate number of study aids.

29. No separate laboratory assistant.

30. School is in congested area.

31. Lack of fully qualified laboratory assistant

32. Lack of provision for taking books to home by students.

33. Lack of adequate number of classrooms

34. Classrooms without proper electric connection.

35. Inadequacy of work shelves and work tables in the laboratory.

36. Lack of provision for taking books to home by teachers.

37. Lack of adequate number of benches and desks in classrooms for students.

38. Overloaded curriculum.

 The area wise distribution of these 38 major instructional problems are presented in Table 8.

TABLE 8

**Area-wise Distribution of Major Instructional Problems
of Higher Secondary School Teachers working in Urban Schools**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 1 | 30 |
| Building and Furniture | 6 | 5, 20, 23, 33, 34, 37 |
| Library | 11 | 2, 3, 6, 7, 9, 10, 13, 15, 22, 32, 36 |
| Laboratory | 5 | 1, 19, 29, 31, 35 |
| Academic Matters | 6 | 4, 11, 12, 14, 18, 38 |
| Computer | 2 | 24, 25 |
| Physical Education | 4 | 8, 16, 17, 26 |
| Audio Visual Aids | 3 | 21, 27, 28 |

 From Table 8 it can be seen that out of the major 38 instructional problems 11 problems are related with library, 6 problems are related with building & furniture, 6 problems are related with academic matters, 5 problems are related with laboratory, 4 problems are related with physical education, 3 are related with audiovisual aids, 2 problems are related with computer and 1 problem is related with school location. That is out 38 major instructional problems 28.9% are related with library, 15.8% each are related with buildings & furniture and academic matters, 13.2% are related with laboratory, 10.5% are related with physical education, 7.8% are related with audio visual aids, 5.3% are related with computer and only 2.7% are related with school location. The area wise distribution of the major instructional problems of higher secondary school teachers working in urban schools is presented in Figure 3.



**FIGURE-3 Area wise Distribution of Major Instructional Problems of Higher Secondary School Teachers Working in Urban Schools**

**2. Identification of Major Instructional Problems of Higher Secondary School Teachers Based on Type of School Management**

***(a) Teachers working in government schools***

 Here the investigator calculated the percentage of occurrence of each instructional problem of the teachers working in government higher secondary schools. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the teachers working in government higher secondary schools in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 9.

TABLE 9

**Rank and Percentage of
Occurrence of Problems of Higher**

**Secondary School Teachers working in Government Schools**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 23 | 30 | 79.12 | 40 |
| 2 | 100 | 33 | 31 | 78.02 | 9 |
| 3 | 100 | 34 | 32 | 78.02 | 55 |
| 4 | 100 | 36 | 33 | 75.82 | 51 |
| 5 | 100 | 54 | 34 | 74.73 | 11 |
| 6 | 97.80 | 4 | 35 | 74.73 | 26 |
| 7 | 96.70 | 21 | 36 | 73.62 | 14 |
| 8 | 96.70 | 58 | 37 | 69.23 | 18 |
| 9 | 95.60 | 20 | 38 | 69.23 | 48 |
| 10 | 94.51 | 19 | 39 | 68.13 | 10 |
| 11 | 93.40 | 28 | 40 | 67.03 | 3 |
| 12 | 92.31 | 15 | 41 | 67.03 | 47 |
| 13 | 92.31 | 16 | 42 | 66.03 | 56 |
| 14 | 90.11 | 35 | 43 | 63.73 | 7 |
| 15 | 90.10 | 41 | 44 | 58.24 | 27 |
| 16 | 89.01 | 22 | 45 | 54.95 | 37 |
| 17 | 87.91 | 24 | 46 | 54.94 | 25 |
| 18 | 87.91 | 42 | 47 | 50.55 | 53 |
| 19 | 86.71 | 17 | 48 | 50.54 | 43 |
| 20 | 85.71 | 32 | 49 | 46.15 | 6 |
| 21 | 84.62 | 5 | 50 | 43.96 | 46 |
| 22 | 83.51 | 13 | 51 | 40.66 | 49 |
| 23 | 83.42 | 57 | 52 | 40.65 | 1 |
| 24 | 82.42 | 38 | 53 | 36.26 | 2 |
| 25 | 82.42 | 39 | 54 | 35.16 | 44 |
| 26 | 81.42 | 30 | 55 | 27.47 | 45 |
| 27 | 81.32 | 29 | 56 | 27.47 | 50 |
| 28 | 80.22 | 31 | 57 | 26.47 | 12 |
| 29 | 80.22 | 52 | 58 | 21.90 | 8 |

 Table 9 shows that in the sample, the percentage of occurrence of problem for the first five ranks are 100 (item no.23, 33, 34, 36 and 54). The sixth highest percentage is 97.80 (item no.4) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the teachers working in government higher secondary schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 9, the investigator could identify 48 problems as major instructional problems felt by the teachers working in government higher secondary schools. These 48 problems are listed below according to their rank of seriousness.

1. Lack of separate librarian

2. No separate laboratory assistant

3. Lack of fully qualified laboratory assistant

4. Lack of language laboratory

5. Lack of separate physical education teacher.

6. Lack of additional room for language classes.

7. Lack of separate reading room.

8. Non-availability of necessary audio visual aids such as OHP, slide projector etc.

9. Improper ventilation and lighting in library.

10. Inadequate room size for library.

11. Lack of adequate room size for laboratory.

12. Non-availability of separate library for higher secondary section.

13. Lack of sufficient number of reference books, journals, news papers, magazines for concerned subjects.

14. Improper maintenance of laboratory.

15. Lack of provision for teachers to participate in refresher programmes.

16. Lack of separate seating arrangements for teachers.

17. Lack of purchase of books, journals etc. demanded by teachers.

18. Lack of opportunity for providing real experience to students.

19. Inadequate number of general books.

20. Inadequacy of workshelves and worktables in the laboratory.

21. Lack of classrooms of prescribed norms.

22. Lack of adequate number of benches and desks in classrooms for students.

23. Lack of adequate number of study aids.

24. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

25. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

26. Inadequate quantity of consumables in laboratory.

27. Inadequacy of laboratory equipments for each science subjects.

28. Laboratory rooms without proper seating arrangements for teachers and students.

29. Lack of sufficient sport materials like volleyball, football etc.

30. Lack of clear cut directions from the authority for executing projects, seminars etc.

31. Classrooms without proper electric connection.

32. Lack of necessary appliances for teaching crafts.

33. Lack of sufficient number of periods for physical education.

34. Classrooms without roofs impervious to heat.

35. Lack of provision for taking books to home by students.

36. Lack of sufficient furniture in classroom for teachers.

37. Inadequacy of hand books and source books of concerned subjects.

38. Computers without internet connection.

39. Classrooms without proper ventilation.

40. Lack of adequate number of classrooms.

41. Lack of well equipped computer room.

42. Lack of quality chalk board.

43. Lack of building of pucca construction.

44. Lack of separate room for laboratory for each science subjects.

45. Overloaded curriculum.

46. Lack of provision for taking books to home by teachers.

47. Non-availability of quality play ground.

48. Lack of extra remuneration for remedial coaching classes.

 The area wise distribution of these 48 major instructional problems are presented in Table 10.

TABLE 10

**Area-wise Distribution of Major Instructional Problems of
Higher Secondary School Teachers working in Government Schools**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 9 | 6, 21, 22, 31, 34, 36, 39, 40, 43 |
| Library | 12 | 1, 7, 9, 10, 12, 13, 16, 17, 19, 35, 37, 46 |
| Laboratory | 10 | 2, 3, 4, 11, 14, 20, 26, 27, 28, 44 |
| Academic Matters | 7 | 15, 18, 24, 25, 30, 45, 48 |
| Computer | 2 | 38, 41 |
| Physical Education | 4 | 5, 29, 33, 47 |
| Audio Visual Aids | 4 | 8, 23, 32, 42 |

 From Table 10 it can be seen that out of the major 48 instructional problems 12 problems are related with library, 10 problems are related with Laboratory, 9 problems are related with building and furniture, 7 problems are related with academic matters, 4 problems are related with physical education, 4 are related with audiovisual aids, 2 problems are related with computer and there is no item related with school location. That is out 48 major instructional problems 25% are related with library, 20.8% are related laboratory, 18.8% are related with building and furniture, 14.6% are related with academic matters, 8.3% each are related with physical education and audio visual aids and only 4.2% are related with computer. The area wise distribution of the major instructional problems of higher secondary school teachers working in government schools is presented in Figure 4.



**FIGURE-4 Area wise Distribution of Major Instructional Problems of Higher Secondary School Teachers Working in Government Schools**

**(b) Teachers working in private schools**

 Here the investigator calculated the percentage of occurrence of each instructional problem of the teachers working in private higher secondary schools. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the teachers working in private higher secondary schools in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 11.

TABLE 11

**Rank and Percentage of
Occurrence of Problems of Higher**

**Secondary School Teachers working in Private Schools**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 36 | 30 | 50.83 | 47 |
| 2 | 98.33 | 23 | 31 | 47.50 | 25 |
| 3 | 94.17 | 21 | 32 | 46.67 | 55 |
| 4 | 94.16 | 41 | 33 | 45.83 | 45 |
| 5 | 90.83 | 4 | 34 | 45.83 | 53 |
| 6 | 87.50 | 19 | 35 | 40.00 | 18 |
| 7 | 86.67 | 16 | 36 | 35.83 | 1 |
| 8 | 85.83 | 20 | 37 | 35.00 | 2 |
| 9 | 84.17 | 54 | 38 | 32.50 | 35 |
| 10 | 83.33 | 22 | 39 | 31.66 | 43 |
| 11 | 80.00 | 38 | 40 | 30.83 | 3 |
| 12 | 79.16 | 24 | 41 | 27.50 | 56 |
| 13 | 79.16 | 58 | 42 | 26.67 | 32 |
| 14 | 78.33 | 17 | 43 | 25.00 | 30 |
| 15 | 77.50 | 39 | 44 | 25.00 | 34 |
| 16 | 75.00 | 42 | 45 | 22.50 | 13 |
| 17 | 70.83 | 51 | 46 | 20.83 | 14 |
| 18 | 70.00 | 40 | 47 | 20.00 | 31 |
| 19 | 67.50 | 52 | 48 | 18.50 | 29 |
| 20 | 65.00 | 15 | 49 | 18.33 | 6 |
| 21 | 64.17 | 48 | 50 | 17.50 | 33 |
| 22 | 63.33 | 5 | 51 | 17.50 | 46 |
| 23 | 61.67 | 26 | 52 | 15.00 | 7 |
| 24 | 60.83 | 11 | 53 | 13.33 | 49 |
| 25 | 56.67 | 37 | 54 | 12.50 | 27 |
| 26 | 55.00 | 57 | 55 | 11.66 | 50 |
| 27 | 53.33 | 10 | 56 | 9.20 | 12 |
| 28 | 52.50 | 28 | 57 | 7.67 | 44 |
| 29 | 51.67 | 9 | 58 | 6.67 | 8 |

 Table 11 shows that in the sample, the highest percentage of occurrence of problem is 100 (item no.36) and the second highest percentage is 98.33 (item no.23) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the teachers working in private higher secondary schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 11, the investigator could identify 30 problems as major instructional problems felt by the teachers working in private higher secondary schools. These 30 problems are listed below according to their rank of seriousness.

1. Lack of language laboratory.

2. Lack of separate librarian.

3. Lack of separate reading room.

4. Lack of provision for teachers to participate in refresher programmes.

5. Lack of additional room for language classes.

6. Inadequate room size for library.

7. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects.

8. Improper ventilation and lighting in library.

9. Lack of separate physical education teacher.

10. Lack of separate seating arrangements for teachers.

11. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

12. Lack of purchase of books, journals etc. demanded by teachers.

13. Non-availability of necessary audio visual aids such as OHP, slide projector etc.

14. Inadequate number of general books.

15. Lazy nature of students in plus one classes due to the exemption of plus one marks from the final public examination.

16. Lack of opportunity for providing real experience to students.

17. Lack of sufficient number of periods for physical education.

18. Lack of clear cut directions from the authority for executing projects, seminars etc.

19. Lack of sufficient sport materials like volleyball, foot ball etc.

20. Non-availability of separate library for higher secondary section.

21. Computers without internet connection.

22. Lack of classrooms of prescribed norms.

23. Lack of provision for taking books to home by students.

24. Classrooms without roofs impervious to heat.

25. Overloaded curriculum.

26. Lack of adequate number of study aids.

27. Classrooms without proper ventilation.

28. Lack of adequate room size for laboratory.

29. Classrooms without proper electric connection.

30. Lack of well equipped computer room.

 The area wise distribution of these 30 major instructional problems are presented in Table 12.

TABLE 12

**Area-wise Distribution of Major Instructional Problems of
Higher Secondary School Teachers working in Private Schools**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 5 | 5, 22, 24, 27, 29 |
| Library | 10 | 2, 3, 6, 7, 8, 10, 12, 14, 20, 23 |
| Laboratory | 2 | 1, 28 |
| Academic Matters | 6 | 4, 11, 15, 16, 18, 25 |
| Computer | 2 | 21, 30 |
| Physical Education | 3 | 9, 17, 19 |
| Audio Visual Aids | 2 | 13, 26 |
|  |  |  |

 From Table 12 it can be seen that out of the major 30 instructional problems, 10 problems are related with library, 6 problems are related with academic matters, 5 problems are related with building and furniture, 3 problems are related with physical education, 2 problems each are related with computer, laboratory and audio visual aids and there is no item related with school location. That is out 30 major instructional problems, 33.3% are related with library, 20% are related with academic matters, 16.6% are related with building and furniture, 10% are related with physical education and 6.7% each are related with computer, laboratory and audio visual aids.



**FIGURE-5 Area wise Distribution of Major Instructional Problems of Higher Secondary School Teachers Working in Private Schools**

**3. Identification of Major Instructional Problems of Higher Secondary School Teachers Based on Teaching Experience**

***(a) Guest teachers***

 Here the investigator calculated the percentage of occurrence of each instructional problem of the guest teachers working in higher secondary schools. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the guest teachers working in higher secondary schools in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 13.

TABLE 13

**Rank and Percentage of Occurrence of
Problems of Higher Secondary School Guest Teachers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 23 | 30 | 84.61 | 32 |
| 2 | 100 | 36 | 31 | 84.60 | 43 |
| 3 | 100 | 54 | 32 | 82.05 | 51 |
| 4 | 97.43 | 33 | 33 | 79.48 | 57 |
| 5 | 97.43 | 34 | 34 | 79.48 | 13 |
| 6 | 97.43 | 41 | 35 | 76.94 | 3 |
| 7 | 94.89 | 58 | 36 | 76.92 | 10 |
| 8 | 94.87 | 4 | 37 | 76.92 | 27 |
| 9 | 94.87 | 28 | 38 | 71.80 | 44 |
| 10 | 94.87 | 38 | 39 | 71.79 | 52 |
| 11 | 94.87 | 39 | 40 | 69.23 | 18 |
| 12 | 94.87 | 15 | 41 | 69.23 | 56 |
| 13 | 94.85 | 20 | 42 | 69.23 | 45 |
| 14 | 94.84 | 21 | 43 | 68.23 | 14 |
| 15 | 94.80 | 22 | 44 | 66.68 | 47 |
| 16 | 92.30 | 5 | 45 | 66.66 | 48 |
| 17 | 92.30 | 42 | 46 | 66.60 | 25 |
| 18 | 92.30 | 16 | 47 | 64.10 | 55 |
| 19 | 89.74 | 17 | 48 | 58.97 | 11 |
| 20 | 89.74 | 19 | 49 | 56.41 | 6 |
| 21 | 89.74 | 35 | 50 | 56.41 | 46 |
| 22 | 89.74 | 29 | 51 | 51.28 | 37 |
| 23 | 87.19 | 7 | 52 | 38.46 | 49 |
| 24 | 87.17 | 9 | 53 | 38.36 | 53 |
| 25 | 87.17 | 24 | 54 | 35.89 | 2 |
| 26 | 87.17 | 26 | 55 | 35.89 | 12 |
| 27 | 87.17 | 31 | 56 | 35.89 | 50 |
| 28 | 87.17 | 40 | 57 | 33.33 | 1 |
| 29 | 84.61 | 30 | 58 | 10.25 | 8 |

 Table 13 shows that in the sample, the percentage of occurrence of problem for the first three ranks are 100 (item no.23, 36, 54) and the fourth highest percentage is 97.43 (item no.33) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the guest teachers working in higher secondary schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 13, the investigator could identify 51 problems as major instructional problems felt by the guest teachers working in higher secondary schools. These 51 problems are listed below according to their rank of seriousness.

1. Lack of separate librarian.

2. Lack of language laboratory

3. Lack of separate physical education teacher.

4. No separate laboratory assistant.

5. Lack of fully qualified laboratory assistant.

6. Lack of provision for teachers to participate in refresher programmes.

7. Non-availability of necessary audio visual aids such as OHP, slide projector etc.

8. Lack of additional room for language classes.

9. Lack of adequate room size for laboratory.

10. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

11. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

12. Non-availability of separate library for higher secondary section.

13. Improper ventilation and lighting in library.

14. Lack of separate reading room.

15. Lack of separate seating arrangements for teachers.

16. Lack of classrooms of prescribed norms.

17. Lack of opportunity for providing real experience to students.

18. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects.

19. Inadequate number of general books.

20. Inadequate room size for library.

21. Improper maintenance of laboratory.

22. Inadequacy of laboratory equipments for each science subjects.

23. Lack of building of pucca construction.

24. Classrooms without proper electric connection .

25. Lack of purchase of books, journals etc. demanded by teachers.

26. Lack of provision for taking books to home by students.

27. Laboratory rooms without proper seating arrangements for teachers and students.

28. Lack of clear cut directions from the authority for executing projects, seminars etc.

29. Inadequate quantity of consumables in laboratory.

30. Inadequacy of work shelves and work tables in the laboratory.

31. Lack of extra remuneration for remedial coaching classes.

32. Lack of sufficient number of periods for physical education.

33. Lack of adequate number of study aids.

34. Lack of adequate number of benches and desks in classroom for students.

35. Lack of adequate number of classrooms.

36. Classrooms without proper ventilation.

37. Lack of separate room for laboratory for each science subjects.

38. Difficulty due to change in medium of instruction into English.

39. Lack of sufficient sports materials like volleyball, football etc.

40. Inadequacy of hand books and source books of concerned subjects.

41. Lack of quality chalkboard.

42. Difficulty in preparation due to lack of sufficient holidays in a week.

43. Lack of sufficient furniture in classroom for teachers.

44. Lack of well equipped computer room.

45. Computers without internet connection.

46. Lack of provision for taking books to home by teachers.

47. Lack of necessary appliances for teaching crafts.

48. Classrooms without roofs impervious to heat.

49. Lack of separate building for higher secondary section.

50. Lack of separate computer room for higher secondary section.

51. Overloaded curriculum.

 The area wise distribution of these 51 major instructional problems are presented in Table 14.

TABLE 14

**Area-wise Distribution of Major Instructional
Problems of Higher Secondary School Guest Teachers**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 10 | 8, 16, 23, 24, 34, 35, 36, 43, 48, 49 |
| Library | 12 | 1, 12, 13, 14, 15, 18, 19, 20, 25, 26, 40, 46 |
| Laboratory | 10 | 2, 4, 5, 9, 21, 22, 27, 29, 30, 37 |
| Academic Matters | 9 | 6, 10, 11, 17, 28, 31, 38, 42, 51 |
| Computer | 3 | 44, 45, 50 |
| Physical Education | 3 | 3, 32, 29 |
| Audio Visual Aids | 4 | 7, 33, 41, 47 |
|  |  |  |

 From Table 14 it can be seen that out of the major 51 instructional problems, 12 problems are related with library, 10 problems are related with laboratory, 10 are related with building and furniture, 9 problems are related with academic matters, 4 problems each are related with audio visual aids, 3 problems are related with computer, 3 are related with physical education and there is no item related with school location. That is out 51 major instructional problems 23.6% are related with library, 19.6% each are related with building and furniture and laboratory, 17.7% are related with academic matters, 7.9% are related with audio visual aids and only 5.8% each are related with computers and physical education. The area wise distribution of the major instructional problems of higher secondary school guest techers is presented in Figure 6.



**FIGURE-6 Area wise Distribution of Major Instructional Problems of Higher Secondary School Guest Teachers**

***(b) Teachers with below ten years experience***

 Here the investigator calculated the percentage of occurrence of each instructional problem of higher secondary school teachers with below ten years experience. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the higher secondary school teachers with below ten years experience in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 15.

TABLE 15

**Rank and Percentage of Occurrence of Problems of Higher
Secondary School Teachers with Below Ten years Experience**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 36 | 30 | 53.27 | 10 |
| 2 | 98.36 | 23 | 31 | 48.36 | 47 |
| 3 | 95.08 | 21 | 32 | 47.54 | 53 |
| 4 | 91.80 | 4 | 33 | 45.08 | 35 |
| 5 | 91.80 | 41 | 34 | 44.26 | 25 |
| 6 | 88.52 | 19 | 35 | 43.44 | 18 |
| 7 | 86.06 | 20 | 36 | 42.62 | 34 |
| 8 | 85.24 | 16 | 37 | 40.98 | 32 |
| 9 | 84.42 | 22 | 38 | 38.52 | 13 |
| 10 | 83.60 | 58 | 39 | 38.52 | 56 |
| 11 | 82.78 | 54 | 40 | 36.88 | 33 |
| 12 | 78.68 | 24 | 41 | 36.06 | 1 |
| 13 | 77.04 | 17 | 42 | 36.06 | 30 |
| 14 | 77.04 | 38 | 43 | 33.60 | 3 |
| 15 | 77.04 | 39 | 44 | 32.79 | 45 |
| 16 | 75.40 | 42 | 45 | 32.78 | 14 |
| 17 | 72.13 | 40 | 46 | 31.96 | 2 |
| 18 | 70.49 | 15 | 47 | 31.96 | 31 |
| 19 | 70.49 | 51 | 48 | 29.50 | 29 |
| 20 | 70.49 | 52 | 49 | 27.04 | 7 |
| 21 | 63.93 | 11 | 50 | 25.40 | 43 |
| 22 | 63.93 | 57 | 51 | 24.59 | 6 |
| 23 | 62.29 | 5 | 52 | 22.95 | 27 |
| 24 | 60.65 | 48 | 53 | 15.57 | 46 |
| 25 | 59.83 | 28 | 54 | 13.93 | 50 |
| 26 | 59.01 | 26 | 55 | 12.30 | 44 |
| 27 | 57.37 | 9 | 56 | 12.29 | 12 |
| 28 | 56.55 | 55 | 57 | 12.29 | 49 |
| 29 | 54.91 | 37 | 58 | 10.65 | 8 |

 Table 15 shows that in the sample, the highest percentage of occurrence of problem is 100 (item no. 36) and the second highest percentage is 98.36 (item no.23) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the higher secondary school teachers with below ten years experience. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 15, the investigator could identify 30 problems as major instructional problems felt by the higher secondary school teachers with below ten years experience. These 30 problems are listed below according to their rank of seriousness.

1. Lack of language laboratory

2. Lack of separate librarian

3. Lack of separate reading room

4. Lack of additional room for language classes.

5. Lack of provision for teachers to participate in refresher programme.

6. Inadequate room size for library.

7. Improper ventilation and lighting in library.

8. Lack of sufficient number of reference books, journals, newspapers, magazines etc. of concerned subjects.

9. Lack of separate seating arrangements for teachers.

10. Non-availability of necessary audio visual aids such as OHP, slide projector etc.

11. Lack of separate physical education teacher.

12. Lack of purchase of books, journals etc. demanded by teachers.

13. Inadequate number of general books.

14. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public examination.

15. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

16. Lack of opportunity for providing real experience to students.

17. Lack of clear cut directions from the authority for executing projects, seminars etc.

18. Non-availability of separate library for higher secondary section.

19. Lack of sufficient number of periods for physical education.

20. Lack of sufficient sports materials like volleyball, foot ball etc.

21. Classrooms without roofs impervious to heat.

22. Lack of adequate number of study aids.

23. Lack of classrooms of prescribed norms.

24. Computers without internet connection.

25. Lack of adequate room size for laboratory.

26. Lack of provision for taking books to home by students.

27. Classrooms without proper electric connection.

28. Lack of necessary appliances for teaching crafts.

29. Overloaded curriculum.

30. Classrooms without proper ventilation.

 The area wise distribution of these 30 major instructional problems are presented in Table 16.

TABLE 16

**Area-wise Distribution of Major Instructional Problems of
Higher Secondary School Teachers with Below Ten Years Experience**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 5 | 4, 21, 23, 27, 30 |
| Library | 10 | 2, 3, 6, 7, 8, 9, 12, 13, 18, 26 |
| Laboratory | 2 | 1, 25 |
| Academic Matters | 6 | 5, 14, 15, 16, 17, 29 |
| Computer | 1 | 24 |
| Physical Education | 3 | 11, 19, 20 |
| Audio Visual Aids | 3 | 10, 22, 28 |
|  |  |  |

 From Table 16 it can be seen that out of the major 30 instructional problems, 10 problems are related with library, 6 problems are related with academic matters, 5 problems are related with building and furniture, 3 problems are related with physical education, 3 problems are related with audio visual aids, 2 problems are related with laboratory, 1 problem is related with computer and there is no item related with school location. That is out of 30 major instructional problems 33.3% are related with library, 20% are related with academic matters, 16.7% are related with building and furniture, 10% each are related with physical education and audio visual aids, 6.7% are related with laboratory and only 3.3% are related with computer. The area wise distribution of the major instructional problems of higher secondary school teachers with below ten years experience is presented in
Figure 7.



**FIGURE-7 Area-wise Distribution of Major Instructional Problems of Higher Secondary School Teachers with Below Ten Years Experience**

***(c) Teachers with more than ten years experience***

 Here the investigator calculated the percentage of occurrence of each instructional problem of higher secondary school teachers with more than ten years experience. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the higher secondary school teachers with more than ten years experience in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 17.

TABLE 17

**Rank and Percentage of Occurrence of Problems of Higher
Secondary School Teachers with More than Ten years Experience**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 23 | 30 | 62 | 55 |
| 2 | 100 | 36 | 31 | 60 | 33 |
| 3 | 96 | 4 | 32 | 60 | 35 |
| 4 | 96 | 19 | 33 | 60 | 57 |
| 5 | 96 | 21 | 34 | 58 | 9 |
| 6 | 94 | 16 | 35 | 58 | 53 |
| 7 | 94 | 20 | 36 | 56 | 37 |
| 8 | 92 | 54 | 37 | 54 | 3 |
| 9 | 88 | 41 | 38 | 54 | 32 |
| 10 | 86 | 17 | 39 | 52 | 14 |
| 11 | 86 | 24 | 40 | 52 | 25 |
| 12 | 86 | 58 | 41 | 52 | 29 |
| 13 | 84 | 22 | 42 | 52 | 30 |
| 14 | 84 | 42 | 43 | 50 | 13 |
| 15 | 80 | 15 | 44 | 46 | 31 |
| 16 | 80 | 52 | 45 | 44 | 1 |
| 17 | 78 | 5 | 46 | 44 | 49 |
| 18 | 78 | 28 | 47 | 42 | 2 |
| 19 | 76 | 38 | 48 | 42 | 56 |
| 20 | 74 | 48 | 49 | 36 | 46 |
| 21 | 72 | 51 | 50 | 30 | 43 |
| 22 | 70 | 11 | 51 | 26 | 45 |
| 23 | 70 | 26 | 52 | 24 | 50 |
| 24 | 70 | 40 | 53 | 22 | 6 |
| 25 | 70 | 39 | 54 | 22 | 7 |
| 26 | 70 | 47 | 55 | 22 | 27 |
| 27 | 64 | 10 | 56 | 20 | 8 |
| 28 | 62 | 18 | 57 | 16 | 12 |
| 29 | 62 | 34 | 58 | 14 | 44 |

 Table 17 shows that in the sample, the percentage of occurrence of problem for the first two ranks are 100 (item no. 23, 26) and the second highest percentage for third, fourth and fifth ranks are 96 (item no.4, 19, 21) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the higher secondary school teachers with more than ten years experience. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 17, the investigator could identify 43 problems as major instructional problems felt by the higher secondary school teachers with more than ten years experience. These 43 problems are listed below according to their rank of seriousness.

1. Lack of separate librarian

2. Lack of language laboratory

3. Lack of additional room for language classes.

4. Inadequate room size for library

5. Lack of separate reading room

6. Lack of sufficient number of reference books, journals, newspapers, magazines etc. for concerned subjects.

7. Improper ventilation and lighting in library.

8. Lack of separate physical education teacher.

9. Lack of provision for teachers to participate in refresher programmes.

10. Inadequate number of general books.

11. Lack of purchase of books, journals etc. demanded by teachers.

12. Non-availability of necessary audio visual aids such OHP, slide projector etc.

13. Lack of separate seating arrangements for teachers.

14. Lack of opportunity for providing real experience to students.

15. Non availability of separate library for higher secondary section.

16. Lack of sufficient sport materials like volleyball, football etc.

17. Lack of clasrooms of prescribed norms.

18. Lack of adequate room size for laboratory.

19. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

20. Computers without internet connection.

21. Lack of sufficient number of periods for physical education.

22. Classrooms without roofs impervious to heat.

23. Lack of provision for taking books to home by students.

24. Lack of clear cut directions from the authority for executing projects, seminars etc.

25. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

26. Lack of well equipped computer room.

27. Classrooms without proper ventilation.

28. Inadequacy of hand books and source books of concerned subjects.

29. Lack of fully qualified laboratory assistant.

30. Lack of necessary appliances for teaching crafts.

31. No separate laboratory assistant.

32. Improper maintenance of laboratory.

33. Lack of adequate number of study aids.

34. Classrooms without proper electric connection.

35. Non availability of quality playground.

36. Overloaded curriculum.

37. Lack of adequate number of classrooms.

38. Inadequacy of workshelves and worktables in the laboratory.

39. Lack of sufficient furniture in class room for teachers.

40. Lack of provision for taking books to home by teachers.

41. Lack of separate room for laboratory for each science subjects.

42. Inadequate quantity of consumables in lab.

43. Lack of adequate number of benches and desks in classrooms for students.

 The area wise distribution of these 43 major instructional problems are presented in Table 18.

TABLE 18

**Area-wise Distribution of Major Instructional Problems of Higher Secondary School Teachers with More than Ten Years Experience**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 8 | 3, 17, 22, 27, 34, 37, 39, 43 |
| Library | 12 | 1, 4, 5, 6, 7, 10, 11, 13, 15, 23, 28, 40 |
| Laboratory | 8 | 2, 18, 29, 31, 32, 38, 41, 42 |
| Academic Matters | 6 | 9, 14, 19, 24, 25, 36 |
| Computer | 2 | 20, 26 |
| Physical Education | 4 | 8, 16, 21, 35 |
| Audio Visual Aids | 3 | 12, 30, 33 |
|  |  |  |

 From Table 18 it can be seen that out of the major 43 instructional problems, 12 problems are related with library, 8 problems are related with building and furniture, 8 are related with laboratory, 6 problems are related with academic matters, 4 problems are related with physical education, 3 problems are related with audio visual aids, 2 problem are related with computer and there is no item related with school location. That is 27.9% are related with library, 18.6% each are related with building & furniture and laboratory, 13.9% are related with academic matters, 9.3% are related with physical education, 6.9% are related with audio visual aids and only 4.8% are related with computer.



**FIGURE-8 Area-wise Distribution of Major Instructional Problems of Higher Secondary School Teachers with More than Ten Years Experience**

**4. Identification of Major Instructional Problems of Higher Secondary School Teachers Based on Area of Specialisation**

***(a) Teachers handling arts subjects (Arts Teachers)***

 Here the investigator calculated the percentage of occurrence of each instructional problem of the arts teachers working in higher secondary schools. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the art teachers working in higher secondary schools in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 19.

TABLE 19

**Rank and Percentage of Occurrence of
Problems of Higher Secondary School Arts Teachers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 36 | 30 | 52.27 | 18 |
| 2 | 98.86 | 23 | 31 | 51.27 | 13 |
| 3 | 95.45 | 21 | 32 | 50.00 | 56 |
| 4 | 93.18 | 14 | 34 | 50.00 | 14 |
| 5 | 93.18 | 54 | 34 | 48.86 | 25 |
| 6 | 90.90 | 41 | 35 | 46.59 | 3 |
| 7 | 89.77 | 20 | 36 | 46.59 | 32 |
| 8 | 89.76 | 19 | 37 | 46.05 | 53 |
| 9 | 87.50 | 16 | 38 | 45.45 | 43 |
| 10 | 86.50 | 58 | 38 | 45.45 | 30 |
| 11 | 85.22 | 22 | 40 | 44.32 | 37 |
| 12 | 82.95 | 24 | 41 | 43.18 | 29 |
| 13 | 79.54 | 38 | 42 | 39.77 | 31 |
| 14 | 79.54 | 42 | 43 | 37.50 | 1 |
| 15 | 78.40 | 15 | 44 | 36.36 | 7 |
| 16 | 76.13 | 39 | 45 | 34.09 | 2 |
| 17 | 75.13 | 17 | 46 | 34.09 | 44 |
| 18 | 73.86 | 40 | 47 | 31.82 | 45 |
| 19 | 72.72 | 5 | 48 | 31.81 | 27 |
| 20 | 71.59 | 52 | 49 | 30.68 | 6 |
| 21 | 68.18 | 48 | 50 | 30.68 | 46 |
| 22 | 66.90 | 51 | 51 | 25.00 | 49 |
| 23 | 65.90 | 57 | 52 | 23.12 | 28 |
| 24 | 64.77 | 26 | 53 | 20.10 | 34 |
| 25 | 62.50 | 9 | 54 | 18.18 | 12 |
| 26 | 61.50 | 55 | 55 | 17.02 | 35 |
| 27 | 60.22 | 11 | 56 | 16.01 | 50 |
| 28 | 57.95 | 47 | 57 | 15.90 | 8 |
| 29 | 56.81 | 10 | 58 | 12.10 | 33 |

 Table 19 shows that in the sample, the highest percentage of occurrence of problem is 100 (item no. 36) and the second highest percentage 98.86 (item no.23) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the arts teachers working in higher secondary schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 19, the investigator could identify 33 problems as major instructional problems felt by the arts teachers working in higher secondary school schools. These 33 problems are listed below according to their rank of seriousness.

1. Lack of language laboratory.

2. Lack of separate librarian

3. Lack of separate reading room.

4. Lack of additional room for language classes.

5. Lack of separate physical education teacher.

6. Lack of provision for teachers to participate in refresher programmes.

7. Improper ventilation and lighting in library.

8. Inadequate room size for library.

9. Lack of sufficient number of reference books, journals, newspapers, magazines etc. for concerned subjects.

10. Non-availability of necessary audio visual aids such as OHP slide projector etc.

11. Lack of separate seating arrangements for teachers.

12. Lack of purchase of books, journals etc. demanded by teachers.

13. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

14. Lack of opportunity for providing real experience to students.

15. Non-availability of separate library for higher secondary section.

16. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

17. Inadequate number of general books.

18. Lack of clear cut directions from the authority for executing projects, seminars etc.

19. Lack of classrooms of prescribed norms.

20. Lack of sufficient sports materials like volleyball, football etc.

21. Computers without internet connection.

22. Lack of sufficient number of periods for physical education.

23. Lack of adequate number of study aids.

24. Lack of provision for taking books to home by students.

25. Classrooms without proper electric connection.

26. Lack of necessary appliances for teaching crafts.

27. Classrooms without roofs impervious to heat.

28. Lack of well equipped computer room.

29. Classrooms without proper ventilation.

30. Inadequacy of handbooks and source books of concerned subjects.

31. Lack of adequate number of benches and desks in classrooms for students.

32. Lack of quality chalkboard.

33. Lack of sufficient furniture in classroom for teachers.

The area wise distribution of these 33 major instructional problems are presented in Table 20.

TABLE 20

**Area-wise Distribution of Major Instructional
Problems of Higher Secondary School Arts Teachers**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 7 | 4, 19, 26, 28, 31, 35, 37 |
| Library | 11 | 2, 3, 7, 8, 9, 11, 12, 15, 17, 25, 34 |
| Laboratory | 1 | 1 |
| Academic Matters | 5 | 6, 13, 14, 16, 18 |
| Computer | 2 | 22, 30 |
| Physical Education | 3 | 5, 20, 23 |
| Audio Visual Aids | 4 | 10, 24, 27, 36 |
|  |  |  |

 From Table 20 it can be seen that out of the major 33 instructional problems 11 problems are related with library, 7 problems are related with building & furniture, 5 are related with academic matters, 4 problems are related with audio visual aids, 3 problems are related with physical education, 2 problems are related with computer, 1 problem is related with laboratory and there is no item related with school location. That is 33.3% are related with library, 21.2% are related with building & furniture, 15.3% are related with academic matters, 12.1% are related with audio visual aids, 9.1% are related with physical education, 6% are related with computer and only 3% are related with laboratory.



**FIGURE-9 Area wise Distribution of Major Instructional Problems of Higher Secondary School Arts Teachers**

***(b) Teachers handling commerce subjects (Commerce Teachers)***

 Here the investigator calculated the percentage of occurrence of each instructional problem of the commerce teachers working in higher secondary schools. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the commerce teachers working in higher secondary school in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 21.

TABLE 21

**Rank and Percentage of Occurrence of
Problems of Higher Secondary School Commerce Teachers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 97.28 | 23 | 30 | 55.59 | 53 |
| 2 | 97.22 | 41 | 31 | 55.55 | 37 |
| 3 | 96.22 | 21 | 32 | 55.55 | 58 |
| 4 | 94.44 | 16 | 33 | 50.00 | 13 |
| 5 | 92.66 | 19 | 34 | 47.22 | 3 |
| 6 | 91.66 | 38 | 35 | 47.22 | 43 |
| 7 | 90.66 | 54 | 36 | 44.44 | 27 |
| 8 | 88.88 | 4 | 37 | 41.67 | 45 |
| 9 | 88.88 | 48 | 38 | 41.66 | 7 |
| 10 | 86.11 | 22 | 39 | 41.66 | 14 |
| 11 | 86.11 | 39 | 40 | 41.66 | 46 |
| 12 | 83.35 | 17 | 41 | 38.88 | 2 |
| 13 | 83.33 | 20 | 42 | 38.88 | 56 |
| 14 | 83.33 | 42 | 43 | 36.11 | 1 |
| 15 | 80.59 | 24 | 44 | 36.11 | 6 |
| 16 | 80.58 | 26 | 45 | 27.77 | 32 |
| 17 | 80.55 | 47 | 46 | 27.77 | 49 |
| 18 | 80.55 | 51 | 47 | 22.22 | 50 |
| 19 | 77.77 | 5 | 48 | 21.2 | 36 |
| 20 | 77.77 | 40 | 49 | 20.20 | 28 |
| 21 | 75.00 | 11 | 50 | 19.92 | 34 |
| 22 | 75.00 | 15 | 51 | 19.92 | 35 |
| 23 | 72.22 | 57 | 52 | 19.44 | 12 |
| 24 | 69.44 | 52 | 53 | 13.88 | 8 |
| 25 | 63.88 | 9 | 54 | 11.58 | 33 |
| 26 | 61.11 | 25 | 55 | 10.56 | 31 |
| 27 | 61.11 | 55 | 56 | 5.56 | 44 |
| 28 | 55.99 | 10 | 57 | 4.21 | 30 |
| 29 | 55.68 | 18 | 58 | 2.24 | 29 |

 Table 21 shows that in the sample, the highest percentage of occurrence of problem is 97.28 (item no. 23) and the second highest percentage is 97.22 (item no.41) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by commerce teachers working in higher secondary schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 21, the investigator could identify 33 problems as major instructional problems felt by the commerce teachers working in higher secondary school. These 33 problems are listed below according to their rank of seriousness.

1. Lack of separate librarian

2. Lack of provision for teachers to participate in refresher programme

3. Lack of separate reading room.

4. Lack of sufficient number of reference books, journals, newspapers, magazines etc. for concerned subjects.

5. Inadequate room size for library.

6. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

7. Lack of separate physical education teacher.

8. Lack of additional room for language classes.

9. Computers without internet connection.

10. Lack of separate seating arrangements for teachers.

11. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

12. Inadequate number of general books.

13. Improper ventilation and lighting in library.

14. Lack of opportunity for providing real experience to students.

15. Lack of purchase of books, journals etc. demanded by teachers.

16. Lack of provision for taking books to home by students.

17. Lack of well equipped computer room.

18. Lack of sufficient number of periods for physical education.

19. Lack of classrooms of prescribed norms.

20. Lack of clear cut directions from the authority for executing projects, seminars etc.

21. Classrooms without roofs impervious to heat.

22. Non-availability of separate library for higher secondary section.

23. Lack of adequate number of study aids.

24. Lack of sufficient sports materials like volleyball, football etc.

25. Classrooms without proper electric connection.

26. Lack of provision for taking books to home by teachers.

27. Lack of necessary appliances for teaching crafts.

28. Classrooms without proper ventilation.

29. Inadequacy of handbooks and source books of concerned subject.

30. Non-availability of quality playground.

31. Overloaded curriculum.

32. Non-availability of necessary audio visual aids such as OHP, slide projector.

33. Lack of adequate number of benches and desks in classrooms for students.

The area wise distribution of these 33 major instructional problems are presented in Table 22.

TABLE 22

**Area-wise Distribution of Major Instructional
Problems of Higher Secondary School Commerce Teachers**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 6 | 9, 20, 22, 28, 33, 40 |
| Library | 12 | 2, 4, 5, 6, 11, 13, 14, 16, 17, 23, 29, 34 |
| Laboratory | 0 | -- |
| Academic Matters | 6 | 3, 7, 12, 15, 21, 36 |
| Computer | 2 | 10, 18 |
| Physical Education | 4 | 8, 19, 25, 35 |
| Audio Visual Aids | 3 | 24, 31, 37 |

 From Table 22 it can be seen that out of the major 33 instructional problems 12 problems are related with library, 6 problems are related with building & furniture, 6 are related with academic matters, 4 problems are related with physical education, 3 problems are related with audio visual aids, 2 problems are related with computer and there are no items related with school location and laboratory. That is 36.4% are related with library, 18.2% each are related with building & furniture and academic matters, 12.1% are related with physical education, 9.1% are related with audio visual aids and only 6% related with computer.



**FIGURE-10 Area wise Distribution of Major Instructional Problems of Higher Secondary School Commerce Teachers**

***(c) Teachers handling science subjects (Science Teachers)***

 Here the investigator calculated the percentage of occurrence of each instructional problem of the science teachers working in higher secondary schools. Then the problems were arranged in the descending order of their percentage of occurrence. By doing so the investigator could identify the instructional problems felt by the science teachers working in higher secondary schools in the order of their seriousness. The rank of each item (problem) in the inventory according to their seriousness and its percentage of occurrence are presented in Table 23.

TABLE 23

**Rank and Percentage of Occurrence of
Problems of Higher Secondary School Science Teachers**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Rank | % of occurrence | Item No. in the inventory | Rank | % of occurrence | Item No. in the inventory |
| 1 | 100 | 23 | 30 | 57.47 | 55 |
| 2 | 100 | 36 | 31 | 56.32 | 32 |
| 3 | 96.54 | 4 | 32 | 55.17 | 48 |
| 4 | 94.25 | 21 | 33 | 52.87 | 34 |
| 5 | 93.10 | 20 | 34 | 51.72 | 18 |
| 6 | 93.10 | 41 | 35 | 51.72 | 30 |
| 7 | 88.50 | 19 | 36 | 49.42 | 33 |
| 8 | 88.50 | 54 | 37 | 48.27 | 25 |
| 9 | 88.50 | 16 | 38 | 48.27 | 31 |
| 10 | 87.35 | 58 | 39 | 48.27 | 47 |
| 11 | 86.20 | 17 | 40 | 45.97 | 3 |
| 12 | 86.20 | 22 | 41 | 45.97 | 53 |
| 13 | 83.90 | 24 | 42 | 44.82 | 13 |
| 14 | 80.45 | 39 | 43 | 44.82 | 29 |
| 15 | 80.45 | 42 | 44 | 42.53 | 45 |
| 16 | 78.16 | 38 | 45 | 41.37 | 56 |
| 17 | 77.01 | 51 | 46 | 39.08 | 1 |
| 18 | 75.86 | 15 | 47 | 37.93 | 14 |
| 19 | 75.86 | 52 | 48 | 35.63 | 2 |
| 20 | 72.41 | 40 | 49 | 33.33 | 7 |
| 21 | 70.11 | 5 | 50 | 31.03 | 43 |
| 22 | 70.11 | 11 | 51 | 28.58 | 27 |
| 23 | 68.96 | 28 | 52 | 27.58 | 6 |
| 24 | 67.81 | 37 | 53 | 24.13 | 49 |
| 25 | 65.51 | 57 | 54 | 21.83 | 46 |
| 26 | 64.36 | 10 | 55 | 18.39 | 50 |
| 27 | 64.36 | 26 | 56 | 14.94 | 12 |
| 28 | 63.21 | 9 | 57 | 10.34 | 8 |
| 29 | 59.77 | 35 | 58 | 9.20 | 44 |

 Table 23 shows that in the sample, the percentage of occurrence of problem for the first two ranks are 100 (item no.23, 36) and the next highest percentage 96.54 (item no.4) and so on.

 After the identification of problems according to their seriousness the investigator put a criteria for the identification of major instructional problems felt by the science teachers working in higher secondary schools. The major problem is to be identified by applying the criteria that problems which occur in more than 50% of the subsample is a major one. By putting such a criteria, from Table 23, the investigator could identify 35 problems as major instructional problems felt by the science teachers working in higher secondary schools. These 35 problems are listed below according to their rank of seriousness.

1. Lack of separate librarian

2. Lack of language laboratory

3. Lack of additional room for language classes.

4. Lack of separate reading room

5. Improper ventilation and lighting in library

6. Lack of provision for teachers to participate in refresher programmes.

7. Inadequate room size for library.

8. Lack of separate physical education teacher.

9. Lack of sufficient number of reference books, journals, newspapes, magazines for concerned subjects.

10. Non-availability of necessary audio visual aids such as OHP, slide projector etc.

11. Inadequate number of general books.

12. Lack of separate seating arrangements for teachers.

13. Lack of purchase of books, journals etc. demanded by teachers.

14. Lazy nature of students in the plus one classes due to exemption of plus one marks from the final public examination.

15. Lack of opportunity for providing real experience to students.

16. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

17. Lack of sufficient number of periods for physical education.

18. Non-availability of separate library for higher secondary section.

19. Lack of sufficient sports materials like volleyball, foot ball etc.

20. Lack of clear cut directions from the authority for executing projects, seminars etc.

21. Lack of class rooms of prescribed norms.

22. Classrooms without roofs impervious to heat.

23. Lack of adequate room size for laboratory.

24. Overloaded curriculum.

25. Lack of adequate number of study aids.

26. Classrooms without proper ventilation.

27. Improper ventilation and lighting in library.

28. Classrooms without proper electric connection.

29. Improper maintenance of laboratory.

30. Lack of necessary appliances for teaching crafts.

31. Inadequacy of work shelves and work tables in the labroatory.

32. Computers without internet connection.

33. Lack of fully qualified laboratory assistant.

34. Inadequacy of hand books and source books of concerned subjects.

35. Inadequate quantity of consumables in laboratory.

The area wise distribution of these 35 major instructional problems are presented in Table 24.

TABLE 24

**Area-wise Distribution of Major Instructional
Problems of Higher Secondary School Science Teachers**

|  |  |  |
| --- | --- | --- |
| Area of Problems | No. of items | Rank numbers |
| School Location | 0 | -- |
| Building and Furniture | 5 | 3, 21, 22, 26, 28 |
| Library | 11 | 1, 4, 5, 7, 9, 11, 12, 13, 18, 27, 34 |
| Laboratory | 6 | 2, 23, 29, 31, 33, 35 |
| Academic Matters | 6 | 6, 14, 15, 16, 20, 24 |
| Computer | 1 | 32 |
| Physical Education | 3 | 8, 17, 19 |
| Audio Visual Aids | 3 | 10, 25, 30 |
|  |  |  |

 From Table 24 it can be seen that out of the major 35 instructional problems, 11 problems are related with library, 6 problems each are related with laboratory and academic matters, 5 problem are related with building & furniture, 3 problems are related with physical education, 3 are related with audio visual aids, 1 problem is related with computer and there is no item related with school location. That is 31.4% are related with library, 17.1% each are related with academic matters and laboratory, 14.3% are related with building and furniture, 8.6% each are related with physical education and audio visual aids and only 2.9% are related with computer.



**FIGURE-11 Area wise Distribution of Major Instructional Problems of Higher Secondary School Science Teachers**

**C. DISPARITIES IN THE MAJOR INSTURCTIONAL PROBLEMS OF HIGHER SECONDARY SCHOOL TEACHERS BASED ON LOCALE OF THE SCHOOL, TYPE OF SCHOOL MANAGEMENT, TEACHING EXPERIENCE AND AREA OF SPECIALISATION**

 This section of analysis was done to examine whether there is any considerable difference in the major instructional problems of higher secondary school teachers based on locale of the school, type of school management, teaching experience and area of specialisation.

**1. Disparities in the major instructional problems of higher secondary school teachers based on locale of the school**

 Here the investigator attempts to examine whether there are considerable differences in the major instructional problems identified for the teachers working in urban and rural higher secondary schools. For this purpose the investigator identified the problems common to the teachers working in rural and urban higher secondary schools and problems occurring only among teachers of rural schools or of urban schools. The item, the percentage of occurrence and the rank number of major instructional problems common to teachers of both rural and urban schools and specific to the teachers of rural or urban schools are presented in Table 25.

TABLE 25

**Item number, Percentage of Occurrence
and Rank number of Major Instructional
Problems Common to Higher Secondary School
Teachers of Rural and Urban Schools and specific
to Higher Secondary School Teachers of Rural/Urban Schools**

|  |  |  |
| --- | --- | --- |
| Major Instructional Problems Common to Higher Secondary School Teachers of Rural and Urban Schools | Major Instructional Problems Occurring only among Higher Secondary School Teachers of Rural Schools | Major Instructional Problems Occurring only among Higher Secondary School Teachers of Urban Schools |
| Item No. | Teachers of Rural School | Teachers of Urban School | Item No. | % of occurrence | Rank | Item No. | % of occurrence | Rank |
| % of occu-rrence | Rank | % of occu-rrence | Rank |
| 36 | 100 | 1 | 100 | 1 | 18 | 59.52 | 30 | 1 | 55.29 | 30 |
| 23 | 99.20 | 2 | 98.82 | 2 | 30 | 54.16 | 34 | 3 | 52.94 | 33 |
| 54 | 97.61 | 3 | 81.17 | 8 | 35 | 63.49 | 28 | 13 | 50.58 | 37 |
| 21 | 96.82 | 4 | 92.94 | 3 |  |  |  | 53 | 57.64 | 26 |
| 20 | 96.03 | 5 | 81.17 | 9 |  |  |  |  |  |  |
| 4 | 95.23 | 6 | 91.76 | 5 |  |  |  |  |  |  |
| 19 | 94.44 | 7 | 84.70 | 6 |  |  |  |  |  |  |
| 16 | 93.65 | 8 | 82.17 | 7 |  |  |  |  |  |  |
| 41 | 92.85 | 9 | 91.76 | 4 |  |  |  |  |  |  |
| 22 | 92.06 | 10 | 76.47 | 15 |  |  |  |  |  |  |
| 58 | 92.06 | 11 | 67.05 | 21 |  |  |  |  |  |  |
| 24 | 86.50 | 12 | 77.64 | 13 |  |  |  |  |  |  |
| 15 | 83.33 | 13 | 66.05 | 22 |  |  |  |  |  |  |
| 42 | 82.53 | 14 | 77.64 | 14 |  |  |  |  |  |  |
| 38 | 81.74 | 15 | 80.00 | 11 |  |  |  |  |  |  |
| 17 | 81.74 | 16 | 80.17 | 10 |  |  |  |  |  |  |
| 39 | 79.36 | 17 | 80.00 | 12 |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 76.19 | 18 | 67.06 | 20 |  |  |  |  |  |  |
| 40 | 74.60 | 19 | 72.94 | 18 |  |  |  |  |  |  |
| 57 | 73.80 | 20 | 56.47 | 28 |  |  |  |  |  |  |
| 52 | 71.42 | 21 | 75.29 | 17 |  |  |  |  |  |  |
| 51 | 70.63 | 22 | 76.47 | 16 |  |  |  |  |  |  |
| 11 | 69.84 | 23 | 62.50 | 23 |  |  |  |  |  |  |
| 26 | 69.04 | 24 | 53.94 | 32 |  |  |  |  |  |  |
| 28 | 69.04 | 25 | 67.08 | 19 |  |  |  |  |  |  |
| 48 | 66.66 | 27 | 58.64 | 24 |  |  |  |  |  |  |
| 55 | 62.69 | 29 | 56.47 | 27 |  |  |  |  |  |  |
| 37 | 59.52 | 31 | 50.58 | 38 |  |  |  |  |  |  |
| 34 | 58.52 | 32 | 54.11 | 31 |  |  |  |  |  |  |
| 47 | 57.93 | 33 | 57.64 | 25 |  |  |  |  |  |  |
| 9 | 53.96 | 35 | 52.94 | 34 |  |  |  |  |  |  |
| 32 | 53.17 | 36 | 52.58 | 35 |  |  |  |  |  |  |
| 33 | 51.58 | 37 | 55.29 | 29 |  |  |  |  |  |  |
| 25 | 50.00 | 38 | 51.76 | 36 |  |  |  |  |  |  |

 Table 25 shows that there are 34 major instructional problems which are common to the teachers working in urban and rural higher secondary schools, 3 major instructional problems occurring only for the teachers working in rural higher secondary schools, 4 major instructional problems occurring only for the teachers working in urban higher secondary schools. Table 25 also shows that there are more major instructional problems among the teachers working in urban higher secondary schools than teachers working in rural schools. The problems which are common to the teachers working in urban and rural higher secondary schools are presented according to the order presented in Table 25 are listed below.

1. Lack of language laboratory

2. Lack of separate librarian

3. Lack of separate physical education teacher.

4. Lack of separate reading room.

5. Improper ventilation and lighting in library.

6. Lack of additional room for language classes.

7. Inadequate room size for library.

8. Lack of sufficient number of reference books, journals, newspapers, magazines etc. for concerned subjects.

9. Lack of provision for teachers to participate in refresher programmes.

10. Lack of separate seating arrangements for teachers.

11. Non availability of necessary audio visual aids such as OHP, slide projector.

12. Lack of purchase of books, journals etc. demanded by teachers.

13. Non-availability of separate library for higher secondary section.

14. Lack of opportunity for providing real experience to students.

15. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

16. Inadequate number of general books.

17. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

18. Lack of classroom of prescribed norms.

19. Lack of clear cut directions from the authority for executing projects, seminars etc.

20. Lack of adequate number of study aids.

21. Lack of sufficient sport materials like volleyball, football etc.

22. Lack of sufficient number of periods for physical education.

23. Classrooms without roofs impervious to heat.

24. Lack of provision for taking books to home by students.

25. Lack of adequate room size for laboratory.

26. Computers without Internet Connection.

27. Lack of necessary appliances for teaching crafts.

28. Overloaded curriculum.

29. Lack of fully qualified laboratory assistant.

30. Lack of well equipped computer room.

31. Classrooms without proper electric connection.

32. Inadequacy of work shelves and work tables in laboratory.

33. No separate laboratory assistant.

34. Lack of provision for taking books to home by teachers.

 The major instructional problems which are occurring only for the teachers working in rural higher secondary schools are listed below.

1. Inadequacy of hand books and source books of concerned subjects.

2. Inadequate quantity of consumables in laboratory.

3. Improper maintenance of laboratory.

 The major instructional problems which are occurring only for the teachers working in urban higher secondary schools are listed below.

1. School is in congested area.

2. Lack of adequate number of classrooms.

3. Lack of adequate number of benches and desks in classroom for students.

4. Non availability of quality playground.

 In the major instructional problems common to the teachers working in rural and urban higher secondary schools, the more number of problems are related with library (11 problems). The other problem areas according to their seriousness are academic matters (6 problems), laboratory (5 problems), building and furniture (4 problems), physical education and audio visual aids (3 problems each) and computer (2 problems).

 In the major instructional problems which are specific to the teachers working in rural higher secondary schools, 1 problem is related with library and 2 problems are related with laboratory.

 In the major instructional problems which are specific to teachers working in urban higher secondary schools, 1 problem is related with school location, 2 problems are related with building and furniture and 1 problem is related with physical education.

 For having an immediate idea about the nature of occurrence of problems from various areas for the teachers working in rural and urban higher secondary schools, the above findings are graphically presented in Figure 12.



FIGURE-12 Areawise Distribution of Major Instructional Problems (in percentage) for Higher Secondary School Teachers working in Rural and Urban Schools.

2. Disparities in the major instructional problems of higher secondary school teachers based on type of school management

 Here the investigator attempts to examine whether there are considerable differences in the major instructional problems identified for the teachers working in government and private higher secondary schools. For this purpose the investigator identified the problems common to the teachers working in government and private higher secondary schools and problems occurring only among teachers of private schools or of government schools. The item, the percentage of occurrence and the rank number of major instructional problems common to teachers of both government and private schools and specific to the teachers of government or private schools are presented in Table 26.

TABLE 26

**Item number, Percentage of Occurrence
and Rank No. of Major Instructional Problems
Common to Higher Secondary School Teachers of
Government and Private Schools and Specific to Higher
Secondary School Teachers of Government/Private Schools**

|  |  |  |
| --- | --- | --- |
| Major Instructional Problems Common to Higher Secondary School Teachers of Government and Private Schools | Major Instructional Problems Occurring only among Higher Secondary School Teachers of Government Schools | Major Instructional Problems Occurring only among Higher Secondary School Teachers of Private Schools |
| Item No. | Teachers of Government School | Teachers of Private School | Item No. | % of occurrence | Rank | Item No. | % of occurrence | Rank |
|  | % of occurrence | Rank | % of occurrence | Rank |  |  |  |  |  |  |
| 23 | 100 | 1 | 98.33 | 2 | 33 | 100 | 2 |  |  |  |
| 36 | 100 | 4 | 100 | 1 | 34 | 100 | 3 |  |  |  |
| 54 | 100 | 5 | 84.17 | 9 | 35 | 90.11 | 14 |  |  |  |
| 4 | 97.80 | 6 | 90.83 | 5 | 32 | 85.71 | 20 |  |  |  |
| 21 | 96.70 | 7 | 94.17 | 3 | 13 | 83.51 | 22 |  |  |  |
| 58 | 96.70 | 8 | 79.16 | 13 | 30 | 81.42 | 26 |  |  |  |
| 20 | 95.60 | 9 | 85.83 | 8 | 29 | 81.32 | 27 |  |  |  |
| 19 | 94.51 | 10 | 87.50 | 6 | 31 | 80.22 | 28 | NIL | NIL | NIL |
| 28 | 93.40 | 11 | 52.50 | 28 | 55 | 78.02 | 32 |
| 15 | 92.31 | 12 | 65.00 | 20 | 14 | 73.62 | 36 |  |  |  |
| 16 | 92.31 | 13 | 86.67 | 7 | 18 | 69.23 | 37 |  |  |  |
| 41 | 90.10 | 15 | 94.16 | 4 | 3 | 67.03 | 40 |  |  |  |
| 22 | 89.01 | 16 | 83.33 | 10 | 56 | 66.03 | 42 |  |  |  |
| 24 | 87.91 | 17 | 79.16 | 12 | 7 | 63.73 | 43 |  |  |  |
| 42 | 87.91 | 18 | 75.00 | 16 | 27 | 58.24 | 44 |  |  |  |
| 17 | 86.71 | 19 | 78.33 | 14 | 25 | 54.94 | 46 |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 84.62 | 21 | 63.33 | 22 | 53 | 50.55 | 47 |  |  |  |
| 57 | 83.42 | 23 | 55.00 | 26 | 43 | 50.54 | 48 |  |  |  |
| 38 | 82.42 | 24 | 80.00 | 11 |  |  |  |  |  |  |
| 39 | 82.42 | 25 | 77.50 | 15 |  |  |  |  |  |  |
| 52 | 8.22 | 29 | 67.50 | 19  |  |  |  |  |  |  |
| 40 | 79.12 | 30 | 70.00 | 18 |  |  |  |  |  |  |
| 9 | 78.02 | 31 | 51.67 | 29 |  |  |  |  |  |  |
| 51 | 75.82 | 33 | 70.83 | 17 |  |  |  |  |  |  |
| 11 | 74.73 | 34 | 60.83 | 24 |  |  |  |  |  |  |
| 26 | 74.73 | 35 | 61.67 | 23 |  |  |  |  |  |  |
| 48 | 69.23 | 38 | 64.17 | 21 |  |  |  |  |  |  |
| 10 | 68.13 | 39 | 53.33 | 27 |  |  |  |  |  |  |
| 47 | 67.03 | 41 | 50.83 | 30 |  |  |  |  |  |  |
| 37 | 54.95 | 45 | 56.67 | 25 |  |  |  |  |  |  |

 Table 26 shows that there are 30 major instructional problems which are common to the teachers working in government and private higher secondary schools, 18 major instructional problems occurring only for the teachers working in government higher secondary school and there is no problem occurring specific for the teachers working in private higher secondary schools. Table 26 also shows that there are more major instructional problems for the teachers working in government higher secondary schools and there is no major instructional problems specific for the teachers working in private higher secondary schools. The problems which are common to higher secondary school teachers working in government and private schools presented in Table 26 are listed below.

1. Lack of separate librarian

2. Lack of language laboratory

3. Lack of separate physical education teacher.

4. Lack of additional room for language classes.

5. Lack of separate reading room

6. Non-availability of necessary audio visual aids such as OHP, slide projector, etc.

7. Improper ventilation and lighting in library.

8. Inadequate room size for library.

9. Lack of adequate room size for laboratory.

10. Non availability of separate library for higher secondary section.

11. Lack of sufficient number of reference books, journals, newspapers, magazines etc. for concerned subjects.

12. Lack of provision for teachers to participate in refresher programmes.

13. Lack of separate seating arrangements for teachers.

14. Lack of purchase of books, journals etc. demanded by teachers.

15. Lack of opportunity for providing real experience to students.

16. Inadequate number of general books.

17. Lack of classrooms of prescribed norms.

18. Lack of adequate number of study aids.

19. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

20. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

21. Lack of sufficient sport materials like volleyball, football etc.

22. Lack of clear cut directions from the authority for executing projects, seminars etc.

23. Classrooms without proper electric connection.

24. Lack of sufficient number of periods for physical education.

25. Classrooms without roofs impervious to heat.

26. Lack of provision for taking books to home by students.

27. Computers without internet connection.

28. Classrooms without proper ventilation

29. Lack of well equipped computer room

28. Overloaded curriculum.

 The major instructional problems which are occurring only for the teachers working in government higher secondary schools are listed below.

1. No separate laboratory assistant

2. Lack of fully qualified laboratory assistant.

3. Improper maintenance of laboratory.

4. Inadequacy of work shelves and work tables in laboratory.

5. Lack of adequate number of benches and desks in classrooms for students.

6. Inadequate quantity of consumables in laboratory.

7. Inadequacy of laboratory equipments for each science subjects.

8. Laboratory rooms without proper seating arrangements for teachers and students.

9. Lack of necessary appliances for teaching crafts.

10. Lack of sufficient furniture in class room for teachers.

11. Inadequacy of hand books and source books of concerned subjects.

12. Lack of adequate number of classrooms.

13. Lack of quality chalkboard

14. Lack of building of pucca construction

15. Lack of separate room for laboratory for each science subjects.

16. Lack of provision for taking books to home by teachers.

17. Non-availability of quality play ground.

18. Lack of extra remuneration for remedial coaching classes.

 There are no major instructional problems which are occurring specific to the teachers working in private higher secondary schools.

 In the major instructional problems common to teachers working in government and private higher secondary schools the more number of problems are related with library (10 problems). The other problem areas according to their seriousness are academic matters (6 problems), building and furniture (5 problems), physical education (3 problems), laboratory, computer and audio visual aids (2 problems each).

 In the major instructional problems which are specific to the teachers working in government higher secondary schools, major problems are related with laboratory (8 problems). The other problems according to their seriousness are building and furniture (4 problems), audio visual aids and library (2 problems each) and academic matters, physical education (1 problem each).

 There is no major instructional problems specific to teachers working in private higher secondary schools.

 For having an immediate idea about the nature of occurrence of problems from various areas for teachers working in government and private higher secondary schools, the above findings are graphically presented as Figure 13.



FIGURE-13 Areawise Distribution of Major Instructional Problems (in percentage) for Higher Secondary School Teachers working in Government and Private Schools.

3. Disparities in the major instructional problems of higher secondary school teachers based on teaching experience

 Here the investigator attempts to examine whether there are considerable differences in the major instructional problems identified for guest teachers, teachers with below ten years experience and teachers with more than ten years experience. For this purpose the investigator identified the problems common to higher secondary school guest teachers, teachers with below ten years experience and teachers with more than ten years experience and problems occurring only among guest teachers or of teachers with below ten years experience or of teachers with more than ten years experience. The item, the percentage of occurrence and the rank number of major instructional problems common to higher secondary school guest teachers, teachers with below ten years experience and teachers with more than ten years experience and specific to the guest teachers, or teachers with below ten years experience or teachers with more than ten years experience are presented in Table 27.

# TABLE 27

Item Number, Percentage of Occurrence and Rank No. of
Major Instructional Problems Common to Higher Secondary School
Guest Teachers, Teachers with Below Ten Years Experience and Teachers
with More than Ten years Experience and specific to Higher Secondary School Guest
Teachers/Teachers with Below Ten Years Experience/Teachers with More than Ten years Experience

|  |  |  |  |
| --- | --- | --- | --- |
| Major Instructional Problems common to Higher Secondary School Guest teachers, Teachers with Below Ten Years Experience and Teachers with More than Ten Years Experience | Major Instructional Problems Occurring only among Higher Secondary School Guest Teachers | Major Instructional Problems Occurring only among Higher Secondary School Teachers with Below Ten Years Experience | Major Instructional Problems Occurring only in Higher Secondary School Teachers with More than Ten Years Experience |
| Guest teachers | Teachers with below ten years experience | Teachers with more than ten years experience | Item No. | % of occurrence | Rank | Item No. | % of occurrence | Rank | Item No. | % of occurrence | Rank |
| Item No. | % of occurrence | Rank | % of occurrence | Rank | % of occurrence | Rank |
| 23 | 100 | 1 | 98.36 | 2 | 100 | 1 | 7 | 87.19 | 23 |  |  |  | 53 | 58 | 35 |
| 36 | 100 | 2 | 100 | 1 | 100 | 2 | 31 | 87.17 | 27 |  |  |  |  |  |  |
| 54 | 100 | 3 | 82.78 | 11 | 92 | 8 | 43 | 84.60 | 31 |  |  |  |  |  |  |
| 41 | 97.43 | 6 | 91.80 | 5 | 88 | 9 | 27 | 76.92 | 37 | NIL | NIL | NIL |  |  |  |
| 58 | 94.89 | 7 | 83.60 | 10 | 86 | 12 | 44 | 71.80 | 38 |  |  |  |  |  |  |
| 4 | 94.87 | 8 | 91.80 | 4 | 96 | 3 | 56 | 69.23 | 41 |  |  |  |  |  |  |
| 28 | 94.87 | 9 | 59.83 | 25 | 78 | 18 | 45 | 69.23 | 42 |  |  |  |  |  |  |
| 38 | 94.87 | 10 | 77.04 | 14 | 76 | 19 | 6 | 56.41 | 49 |  |  |  |  |  |  |
| 39 | 94.87 | 11 | 77.04 | 15 | 70 | 25 | 46 | 56.41 | 50 |  |  |  |  |  |  |
| 15 | 94.87 | 12 | 70.49 | 18 | 80 | 15 |  |  |  |  |  |  |  |  |  |
| 20 | 94.85 | 13 | 86.06 | 7 | 94 | 7 |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 21 | 94.84 | 14 | 95.08 | 3 | 96 | 5 |  |  |  |  |  |  |  |  |  |
| 22 | 94.80 | 15 | 84.42 | 9 | 84 | 13 |  |  |  |  |  |  |  |  |  |
| 5 | 92.30 | 16 | 62.29 | 23 | 78 | 17 |  |  |  |  |  |  |  |  |  |
| 42 | 92.30 | 17 | 75.40 | 16 | 84 | 14 |  |  |  |  |  |  |  |  |  |
| 16 | 92.30 | 18 | 85.24 | 8 | 94 | 6 |  |  |  |  |  |  |  |  |  |
| 17 | 89.74 | 19 | 77.04 | 13 | 86 | 10 |  |  |  |  |  |  |  |  |  |
| 19 | 89.74 | 20 | 88.52 | 6 | 96 | 4 |  |  |  |  |  |  |  |  |  |
| 9 | 87.17 | 24 | 57.37 | 27 | 58 | 34 |  |  |  |  |  |  |  |  |  |
| 24 | 87.17 | 25 | 78.68 | 12 | 86 | 11 |  |  |  |  |  |  |  |  |  |
| 26 | 87.17 | 26 | 59.01 | 26 | 70 | 23 |  |  |  |  |  |  |  |  |  |
| 40 | 87.17 | 28 | 72.13 | 17 | 70 | 24 |  |  |  |  |  |  |  |  |  |
| 51 | 82.05 | 32 | 70.49 | 19 | 72 | 21 |  |  |  |  |  |  |  |  |  |
| 57 | 79.48 | 33 | 63.93 | 22 | 60 | 33 |  |  |  |  |  |  |  |  |  |
| 10 | 76.92 | 36 | 53.27 | 30 | 64 | 27 |  |  |  |  |  |  |  |  |  |
| 52 | 71.79 | 39 | 70.49 | 20 | 80 | 16 |  |  |  |  |  |  |  |  |  |
| 48 | 66.66 | 45 | 60.65 | 24 | 74 | 20 |  |  |  |  |  |  |  |  |  |
| 55 | 64.10 | 47 | 56.55 | 28 | 62 | 30 |  |  |  |  |  |  |  |  |  |
| 11 | 58.97 | 48 | 63.93 | 21 | 70 | 22 |  |  |  |  |  |  |  |  |  |
| 37 | 51.28 | 51 | 54.91 | 29 | 56 | 36 |  |  |  |  |  |  |  |  |  |

Table 27 shows that there are 30 major instructional problems which are common to higher secondary school guest teachers, teachers with below ten years experience and teachers with more than ten years experience, 9 problems occurring only to guest teachers, 1 problem occurring only to teachers with more than ten years experience and no problem occurring specifically to teachers with below ten years experience. Table 27 also shows that there are more major instructional problems faced by higher secondary school guest teachers.

The problems which are common to higher secondary school guest teachers, teachers with below ten years experience and teachers with more than ten years experience are presented according to the order presented in Table 27 are listed below.

1. Lack of separate librarian

2. Lack of language laboratory

3. Lack of separate physical education teacher.

4. Lack of provision for teachers to participate in refresher programmes.

5. Non-availability of necessary audio visual aids such as OHP, slide projector.

6. Lack of additional room for language classes.

7. Lack of adequate room size for laboratory.

8. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.

9. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination.

10. Non availability of separate library for higher secondary section.

11. Improper ventilation and lighting in library.

12. Lack of separate reading room

13. Lack of separate seating arrangements for teachers.

14. Lack of classrooms of prescribed norms.

15. Lack of opportunity for providing real experience to students.

16. Lack of sufficient number of reference books, journals, magazines etc. for concerned subject.

17. Inadequate number of general books.

18. Inadequate room size for library

19. Classrooms without proper electric connection.

20. Lack of purchase of books, journals, etc. demanded by teachers.

21. Lack of provision for taking books to home by students.

22. Lack of clear cut directions from the authority for executing projects, seminars etc.

23. Lack of sufficient numbers of periods for physical education.

24. Lack of adequate number of study aids.

25. Classrooms without proper ventilation

26. Lack of sufficient sports materials like volley ball, foot ball etc.

27. Computers without internet connection.

28. Lack of necessary appliances for teaching crafts.

29. Classrooms without roofs impervious to heat.

30. Overloaded curriculum.

 The major instructional problems which are specific to higher secondary school guest teachers are listed below.

1. Lack of building of pucca construction

2. Laboratory rooms without proper seating arrangements for teachers.

3. Lack of extra remuneration for remedial coaching classes.

4. Lack of separate room for laboratory for each science subjects.

5. Difficulty due to change in medium of instruction into english.

6. Lack of quality chalkboard.

7. Difficulty in preparation due to lack of sufficient holidays in a week.

8. Lack of separate building for higher secondary section.

9. Lack of separate computer room for higher secondary section.

 There is no major instructional problems specific to higher secondary school teachers with below ten years experience.

The major instructional problem which are specific to higher secondary teachers with more than ten years experience is.

1. Non-availability of quality playground

In the major instructional problems common to higher secondary school guest teachers, teachers with below ten years experience and teachers with more than ten years experience, the highest number of problems are related with library (10 problems). The other problem areas according to their seriousness are academic matters (6 problems), building and furniture (5 problems), physical education and audio visual aids (3 problems each), laboratory (2 problems) and computer (1 problem).

In the major instructional problems which are specific to higher secondary school guest teachers there are (3 problems) in the academic matters, (2 problems each) are related with building and furniture and laboratory (1 problem each) are related with computer and audio visual aids.

There is no major instructional problems which are specific to higher secondary school teachers with below ten years experience.

In the major instructional problems which are specific to higher secondary school teachers with more than ten years experience there is (1 problem) which are related with physical education.

For having an immediate idea about the nature of occurrence of instructional problems from various areas for higher secondary school guest teachers, teachers with below ten years experience and teachers with more than ten years experience are graphically presented as Figure 14.



**FIGURE-13 Area-wise Distribution of Major Instructional Problems (in percentage) for Higher Secondary School Guest Teachers, Teachers with Below Ten Years Experience and Teachers with More Than Ten Years Experience.**

4. Disparities in the major instructional problems of higher secondary school teachers based on area of specialisation

 Here the investigator attempts to examine whether there are considerable differences in the major instructional problems identified for higher secondary school arts, commerce, and science teachers. For this purpose the investigator identified the problems common to higher secondary school arts teachers (Teachers handling Arts subjects), Commerce teachers (Teachers handling Commerce subjects) and Science teachers (Teachers handling Science subjects) and problems occurring only in arts teachers or commerce teachers or science teachers. The items, the percentage of occurrence and the rank numbers of major instructional problems common to higher secondary school arts, commerce and science teachers and specific to higher secondary school arts teachers or commerce teachers or science teachers are presented in Table 28.

# TABLE 28

Item Number, Percentage of Occurrence and Rank No. of Major
Instructional Problems Common to Higher Secondary School Arts, Commerce
and Science Teachers and specific to Higher Secondary School Arts/ Commerce/ Science teachers

|  |  |  |  |
| --- | --- | --- | --- |
| Major Instructional Problems common to Higher Secondary School Arts, Commerce and Science Teachers | Major Instructional Problems Occurring only among Arts teachers | Major Instructional Problems Occurring only among Commerce Teachers | Major instructional problems Occurring only among Science Teachers |
| Arts Teachers | Commerce Teachers | Science Teachers | Item No. | % of occurrence | Rank | Item No. | % of occurrence | Rank | Item No. | % of occurrence | Rank |
| Item No. | % of occurrence | Rank | % of occurrence | Rank | % of occurrence | Rank |
| 23 | 98.86 | 2 | 97.28 | 1 | 100 | 1 | 56 | 50 | 32 | 25 | 61.11 | 26 | 28 | 68.96 | 23 |
| 21 | 95.45 | 3 | 96.22 | 3 | 94.25 | 4 | 14 | 50 | 33 | 53 | 55.59 | 30 | 35 | 59.77 | 29 |
| 4 | 93.18 | 4 | 88.88 | 8 | 96.54 | 3 |  |  |  |  |  |  | 32 | 56.32 | 31 |
| 54 | 93.18 | 5 | 90.66 | 7 | 88.50 | 8 |  |  |  |  |  |  | 34 | 52.87 | 33 |
| 41 | 90.90 | 6 | 97.22 | 2 | 93.10 | 6 |  |  |  |  |  |  | 30 | 51.72 | 35 |
| 20 | 89.77 | 7 | 83.33 | 13 | 93.10 | 5 |  |  |  |  |  |  |  |  |  |
| 19 | 89.76 | 8 | 92.66 | 5 | 88.50 | 7 |  |  |  |  |  |  |  |  |  |
| 16 | 87.50 | 9 | 94.44 | 4 | 88.50 | 9 |  |  |  |  |  |  |  |  |  |
| 58 | 86.50 | 10 | 55.55 | 32 | 87.35 | 10 |  |  |  |  |  |  |  |  |  |
| 22 | 85.22 | 11 | 86.11 | 10 | 86.20 | 12 |  |  |  |  |  |  |  |  |  |
| 24 | 82.95 | 12 | 80.59 | 15 | 83.90 | 13 |  |  |  |  |  |  |  |  |  |
| 38 | 79.54 | 13 | 91.66 | 6 | 78.16 | 16 |  |  |  |  |  |  |  |  |  |
| 42 | 79.54 | 14 | 83.33 | 14 | 80.45 | 15 |  |  |  |  |  |  |  |  |  |
| 15 | 78.40 | 15 | 75.00 | 22 | 75.86 | 18 |  |  |  |  |  |  |  |  |  |
| 39 | 76.13 | 16 | 86.11 | 11 | 80.45 | 14 |  |  |  |  |  |  |  |  |  |
| 17 | 75.13 | 17 | 83.35 | 12 | 86.20 | 11 |  |  |  |  |  |  |  |  |  |
| 40 | 73.86 | 18 | 77.77 | 20 | 72.41 | 20 |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 72.72 | 19 | 77.77 | 19 | 70.11 | 21 |  |  |  |  |  |  |  |  |  |
| 52 | 71.59 | 20 | 69.44 | 24 | 75.86 | 19 |  |  |  |  |  |  |  |  |  |
| 48 | 68.18 | 21 | 88.88 | 9 | 55.17 | 32 |  |  |  |  |  |  |  |  |  |
| 51 | 66.90 | 22 | 80.55 | 18 | 77.01 | 17 |  |  |  |  |  |  |  |  |  |
| 57 | 65.90 | 23 | 72.22 | 23 | 65.51 | 25 |  |  |  |  |  |  |  |  |  |
| 26 | 64.77 | 24 | 80.58 | 16 | 64.36 | 27 |  |  |  |  |  |  |  |  |  |
| 9 | 62.50 | 25 | 63.88 | 25 | 63.21 | 28 |  |  |  |  |  |  |  |  |  |
| 55 | 61.50 | 26 | 61.11 | 27 | 57.47 | 30 |  |  |  |  |  |  |  |  |  |
| 11 | 60.22 | 27 | 75.00 | 21 | 70.11 | 22 |  |  |  |  |  |  |  |  |  |
| 10 | 56.81 | 29 | 55.99 | 28 | 64.36 | 26 |  |  |  |  |  |  |  |  |  |
| 18 | 52.27 | 30 | 55.68 | 29 | 51.72 | 34 |  |  |  |  |  |  |  |  |  |

 Table 28 shows that there are 28 major instructional problems which are common to higher secondary school arts, commerce and science teachers, 5 problems occurring only to science teachers, 2 problems each occurring to arts and commerce teachers. Table 28 also shows that there are more major instructional problems for science teachers than arts and commerce teachers. The major instructional problems which are common to arts, commerce and science teachers are presented according to the order presented in Table 28 are listed below.

1. Lack of separate librarian

1. Lack of separate reading room.
2. Lack of additional room for language classes.
3. Lack of separate physical education teacher.
4. Lack of provision for teachers to participate in refresher programmes.
5. Improper ventilation and lighting in library.
6. Inadequate room size for library.
7. Lack of sufficient number of reference books, journals, newspapers, magazines etc. for concerned subjects.
8. Non-availability of necessary audio visual aids such as OHP, slide projector, etc.
9. Lack of separate seating arrangements for teachers.
10. Lack of purchase of books, journals etc. demanded by teachers.
11. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam.
12. Lack of opportunity for providing real experience to students.
13. Non-availability of separate library for higher secondary section.
14. Lazy nature of students in the plus one classes due to exemption of plus one marks from the final public examination.
15. Inadequate number of general books.
16. Lack of clear cut directions from the authority for executing projects, seminars etc.
17. Lack of classrooms of prescribed norms.
18. Lack of sufficient sports materials like volleyball, football etc.
19. Computers without internet connection.
20. Lack of sufficient number of periods for physical education.
21. Lack of adequate number of study aids.
22. Lack of provision for taking books to home by students.
23. Classrooms without proper electric connection.
24. Lack of necessary appliances for teaching crafts.
25. Classrooms without roofs impervious to heat.
26. Classrooms without proper ventilation.
27. Inadequacy of hand books and source books of concerned subjects.

 The major instructional problems which are specific to the arts teachers working in higher secondary schools are listed below.

1. Lack of quality chalkboard.

2. Lack of sufficient furniture in classroom for teachers.

 The major instructional problems which are specific to commerce teachers working in higher secondary schools are listed below:

1. Lack of provision for taking books to home by teachers.

2. Non-availability of quality play ground.

 The major instructional problems specific to the science teachers working in higher secondary schools are listed below.

1. Lack of adequate room size for laboratory.

2. Improper maintenance of laboratory.

3. Inadequacy of work shelves and work tables in the laboratory.

4. Lack of fully qualified laboratory assistant.

5. Inadequate quantity of consumables in laboratory.

 In the major instructional problems common to arts, commerce and science teachers, the highest number of problems are related with library (11 problems). The other problem areas according to their seriousness are building and furniture, academic matters (5 problems each), audio visual aids and physical education (3 problems each) and computer (1 problem).

 In the major instructional problems which are specific to arts teachers, there are one problem each in audio visual aids and building and furniture.

 In the major instructional problems which are specific to commerce teachers there are (1 problem each) related with library and physical education.

 In the major instructional problems which are specific to science teachers there are (5 problems) related with laboratory. For having an immediate idea about the nature of occurrence of problems from various areas for arts, commerce and science teachers, the above findings are graphically presented as Figure 15.



**FIGURE-15 Areawise Distribution of Major Instructional Problems (in percentage) for Higher Secondary School Arts, Commerce and Science Teachers.**

General Comments

 There are 37 major instructional problems identified for total sample of teachers working at higher secondary school level. For the higher secondary school teachers working in rural schools there are 38 major instructional problems and for higher secondary school teachers working in urban schools there are 38 major instructional problems. For the higher secondary school teachers working in government schools there are 48 major instructional problems and for the higher secondary school teachers working in private schools, there are 30 major instructional problems. For the higher secondary school guest teachers there are 51 major instructional problems, for the higher secondary school teachers with below ten years experience there are 30 major instructional problems and for the higher secondary school teachers with more than ten years experience there are 43 major instructional problems. For higher secondary school teachers with regard to area of specialisation, arts teachers (Teachers handling Arts subjects) have 33 major instructional problems, commerce teachers (Teachers handling commerce subjects) have 33 major instructional problems and science teachers (Teachers handling science subjects) have 35 major instructional problems. For the total sample and for the subsamples more instructional problems are related with library.

SUMMARY OF PROCEDURE, FINDINGS
AND SUGGESTIONS

 This chapter provides a summary of procedure, major findings, tenability of hypothesis, educational implications and suggestions for further research.

# RESTATEMENT OF THE PROBLEM

 The study was entitled as "INSTRUCTIONAL PROBLEMS FACED BY HIGHER SECONDARY SCHOOL TEACHERS".

# OBJECTIVES

 The objectives of the present study were the following:

1. To identify the major instructional problems faced by higher secondary school teachers for the total sample and sub samples based on,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

2. To examine whether there is considerable difference in the major instructional problems identified for the higher secondary school teachers based on,

 (i) Locale of the School

 (ii) Type of school Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

## HYPOTHESIS

 The hypothesis set forth for the study was

**There will be considerable difference in the major instructional problems based on,**

 **(i) Locale of the School**

 **(ii) Type of School Management**

 **(iii) Teaching Experience**

 **(iv) Area of Specialisation**

METHODOLOGY

 **Methodology deals with precise description of sample used for the study, tool and statistical technique used.**

*Sample*

 **The study was conducted on a sample of 211 teachers drawn from 44 higher secondary schools located in Kozhikode district using stratified sampling technique. The sample was selected by giving due representation to the stratas viz., locale of the school, type of school management, teaching experience and area of specialisation.**

Tool Used

 **The tool used for the present study was "Instructional Problem Inventory for Higher Secondary School Teachers" (2005).**

Statistical Technique Used

 **Estimation of Percentages .**

MAJOR FINDINGS OF THE STUDY

 **The major findings of the study are summarised as follows:**

I. Major Instructional Problems of Higher Secondary School Teachers

 **For the total sample there are 37 major instructional problems belonging to the eight areas viz., school location, building and furniture, library, laboratory, academic matters, computer, physical education and audio visual aids. Out of these 37 major instructional problems, 12 problems are related with library (32.4%), 6 problems each are related with laboratory and academic matters (16.2%), 5 problems are related with building & furniture (13.6%), 3 problems each are related with physical education and audio visual aids (8.1%), 2 problems are related with computer (5.4%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate reading room (95.26%)**

**2. Lack of separate librarian (94.31%)**

**3. Inadequate room size for library (90.52%).**

**4. Improper ventilation and lighting in library (90.04%).**

**5. Lack of sufficient number of reference books journals, newspapers, magazines for concerned subjects (89.09%).**

**6. Lack of separate seating arrangements for teachers (85.78%).**

**7. Lack of purchase of books, journals etc. demanded by teachers (82.93%).**

**8. Inadequate number of general books (81.51%).**

**9. Non-availability of separate library for higher secondary section (76.77%).**

**10. Lack of provision for taking books to home by students (67.29%).**

**11. Inadequacy of hand books and source books of concerned subjects (52.60%).**

**12. Lack of provision for taking books to home by teachers (50.71%).**

Laboratory

**1. Lack of language laboratory (100%)**

**2. Lack of adequate room size for laboratory (70.14%).**

**3. Lack of fully qualified laboratory assistant (57.34%).**

**4. Improper maintenance of laboratory (57.34%).**

**5. No separate laboratory assistant (53.08%).**

**6. Inadequacy of workshelves and worktables in the laboratory (52.13%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (92.41%).**

**2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (81.04%).**

**3. Lack of opportunity for providing real experience to students (80.56%).**

**4. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (79.62%).**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (73.93%).**

**6. Overloaded curriculum (55.92%).**

Building and Furniture

**1. Lack of additional room for language classes (93.83%).**

**2. Lack of classrooms of prescribed norms (72.51%).**

**3. Classrooms without roofs impervious to heat (66.82%).**

**4. Classrooms without proper electric connection (63.03%).**

**5. Classrooms without proper ventilation (59.71%).**

Physical Education

**1. Lack of separate physical education teachers (90.99%).**

**2. Lack of sufficient sports materials like volleyball football etc. (72.98%).**

**3. Lack of sufficient number of periods for physical education (72.98%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (86.72%).**

**2. Lack of adequate number of study aids (66.82%).**

**3. Lack of necessary appliances for teaching crafts (60.18%).**

Computer

**1. Computers without internet connection (66.35%).**

**2. Lack of well equipped computer room (57.81%).**

II. Major Instructional Problems of Higher Secondary School Teachers Based on Locale of the School

*a) Teachers working in rural higher secondary schools*

 **For the teachers working in rural higher secondary schools there are 38 major instructional problems belonging to the eight areas viz., school location, building and furniture, library, laboratory, academic matters, computer, physical education and audio visual aids. Out of these 38 major instructional problems, 12 problems are related with library (31.6%), 7 problems are related with laboratory (18.4%), 6 problems are related with academic matters (15.8%), 5 problems are related with building & furniture (13.2%), 3 problems each are related with physical education and audio visual aids (7.9%), 2 problems are related with computer (5.2%). There is no major instructional problem related with school location. Area-wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (99.20%)**

**2. Lack of separate reading room (96.82%)**

**3. Improper ventilation and lighting in library (96.03%)**

**4. Inadequate room size for library (94.44%).**

**5. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (93.65%).**

**6. Lack of separate seating arrangements for teachers (92.06%).**

**7. Lack of purchase of books, journals etc. demanded by teachers (86.50%).**

**8. Non-availability of separate library for higher secondary section (83.33%).**

**9. Inadequate number of general books (81.74%).**

**10. Lack of provision for taking books to home by students (69.04%).**

**11. Inadequacy of hand books and source books of concerned subjects (59.52%).**

**12. Lack of provision for taking books to home by teachers (50%).**

Laboratory

**1. Lack of language laboratory (100%).**

**2. Lack of adequate room size for laboratory (69.04%).**

**3. Improper maintenance of laboratory (63.49)**

**4. Lack of fully qualified laboratory assistant (58.52%).**

**5. Inadequate quantity of consumables in laboratory (54.16%).**

**6. Inadequacy of work shelves and work tables in laboratory (53.17%).**

**7. No separate laboratory assistant (51.58%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (92.85%).**

**2. Lack of opportunity for providing real experience to students (82.53%).**

**3. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (81.74%).**

**4. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (79.36%).**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (74.60%).**

**6. Overloaded curriculum (59.52%).**

Building & Furniture

**1. Lack of additional room for language classes (95.23%).**

**2. Lack of classrooms of prescribed norms (76.19%).**

**3. Classrooms without roofs impervious to heat (69.84%).**

**4. Classrooms without proper ventilation (66.66%).**

**5. Classrooms without proper electric connection (53.96%).**

Physical Education

**1. Lack of separate physical education teacher (97.61%).**

**2. Lack of sufficient sportsmaterials like volleyball, football etc. (71.42%).**

**3. Lack of sufficient number of periods for physical education (70.63%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (92.06%).**

**2. Lack of adequate number of study aids (73.80%).**

**3. Lack of necessary appliances for teaching crafts (62.69%).**

Computer

**1. Computer without internet connection (66.66%).**

**2. Lack of well equipped computer room (57.93%).**

*b) Teachers working in urban higher secondary schools*

**For the teachers working in urban higher secondary schools there are 38 major instructional problems. Out of these, 11 problems are related with library (28.9%), 6 problems each are related with building & furniture and academic matters (15.8%), 5 problems are related with laboratory (13.2%), 4 problems are related with physical education (10.5%), 3 problems are related with audio visual aids (7.8%) 2 problems are related with computer (5.3%) and 1 problem is related with school location (2.7%). Area wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (98.82%)**

**2. Lack of separate reading room (92.94%)**

**3. Improper ventilation and lighting in library (84.70%)**

**4. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (82.17%).**

**5. Improper ventilation and lighting in library (81.17%)**

**6. Inadequate number of general books (80.17%).**

**7. Lack of purchase of books, journals etc. demanded by teachers (77.64%).**

**8. Lack of separate seating arrangements for teachers (76.47%).**

**9. Non-availability of separate library for higher secondary section (66.05%).**

**10. Lack of provision for taking books to home by students (53.94%).**

**11. Lack of provision for taking books to home by teachers (51.76%).**

Laboratory

**1. Lack of language laboratory (100%).**

**2. Lack of adequate room size for laboratory (67.08%).**

**3. No separate laboratory assistant (55.29%).**

**4. Lack of fully qualified laboratory assistant (54.11%).**

**5. Inadequacy of work shelves and work tables in the laboratory (52.58%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (91.76%).**

**2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (80%).**

**3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (80%).**

**4. Lack of opportunity for providing real experience to students (77.64%).**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (72.94%).**

**6. Overloaded curriculum (50.58%).**

Building & Furniture

**1. Lack of additional room for language classes (91.76%).**

**2. Lack of classrooms of prescribed norms (67.06%).**

**3. Classrooms without roofs impervious to heat (62.50%).**

**4. Lack of adequate number of classrooms (52.94%)**

**5. Classrooms without proper electric connection (52.94%).**

**6. Lack of adequate number of benches and desks in classrooms for students (50.58%).**

Physical Education

**1. Lack of separate physical education teacher (81.17%)**

**2. Lack of sufficient number of periods for physical education (76.47%).**

**3. Lack of sufficient sports materials like volleyball, football etc. (75.29%).**

**4. Non-availability of quality playground (57.64%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (67.05%).**

**2. Lack of necessary appliances for teaching crafts (56.47%)**

**3. Lack of adequate number of study aids (56.47%).**

Computer

**1. Computer without internet connections (58.64%).**

**2. Lack of well equipped computer room (57.64%).**

School Location

**1. School is in congested area (55.29%).**

III. Major Instructional Problems of Higher Secondary School Teachers Based on Type of School Management

*a) Teachers working in government higher secondary schools*

**For the teachers working in government higher secondary schools there are 48 major instructional problems belonging to the eight areas. Out of these 48 major instructional problems, 12 problems are related with library (25%), 10 problems are related with laboratory (20.8%), 9 problems are related with building & furniture (18.8%), 7 problems are related with academic matters (14.6%), 4 problems each are related with physical education and audio visual aids (8.3%), 2 problems are related with computer (4.2%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (100%)**

**2. Lack of separate reading room (96.70%)**

**3. Improper ventilation and lighting in library (95.60%)**

**4. Inadequate room size for library (94.51%)**

**5. Non-availability of separate library for higher secondary section (92.31%).**

**6. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (92.31%).**

**7. Lack of separate seating arrangements for teachers (89.01%).**

**8. Lack of purchase of books, journals etc. demanded by teachers (87.91%).**

**9. Inadequate number of general books (86.71%).**

**10. Lack of provision for taking books to home by students (74.73%).**

**11. Inadequacy of handbooks and source books of concerned subjects (69.23%).**

**12. Lack of provision for taking books to home by teachers (54.94%).**

Laboratory

**1. No separate laboratory assistant (100%)**

**2. Lack of fully qualified laboratory assistant (100%).**

**3. Lack of language laboratory (100%).**

**4. Lack of adequate room size for laboratory (93.40%).**

**5. Improper maintenance of laboratory (90.11%).**

**6. Inadequacy of work shelves and work tables in the laboratory (85.71%).**

**7. Inadequate quantity of consumables in the laboratory (81.42%)**

**8. Inadequacy of laboratory equipments for each science subjects (81.32%).**

**9. Laboratory rooms without proper seating arrangements for teachers and students (80.22%).**

**10. Lack of separate room for laboratory for each science subjects (58.24%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (90.10%).**

**2. Lack of opportunity for providing real experience to students (87.91%).**

**3. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (82.42%).**

**4. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (82.42%).**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (79.12%).**

**6. Overloaded curriculum (54.95%).**

**7. Lack of extra remuneration for remedial coaching classes (50.54%).**

Building & Furniture

**1. Lack of additional room for language classes (97.80%).**

**2. Lack of classrooms of prescribed norms (84.62%)**

**3. Lack of adequate number of benches and desks in classrooms for students (83.51%).**

**4. Classrooms without proper electric connection (78.02%).**

**5. Classrooms without roofs impervious to heat (74.73%).**

**6. Lack of sufficient furniture in classroom for teachers (73.62%)**

**7. Classrooms without proper ventilation (68.13%)**

**8. Lack of adequate number of classrooms (67.03%)**

**9. Lack of building of pucca construction (63.73%).**

Physical Education

**1. Lack of separate physical education teachers (100%)**

**2. Lack of sufficient sports materials like volleyball, football etc. (80.22%).**

**3. Lack of sufficient number of periods for physical education (75.82%).**

**4. Non-availability of quality playground (50.55%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (96.70%).**

**2. Lack of adequate number of study aids (83.42%).**

**3. Lack of necessary appliances for teaching crafts (78.02%)**

**4. Lack of quality chalk board (66.03%).**

Computer

**1. Computer without Internet Connections (69.23%).**

**2. Lack of well equipped computer room (67.03%)**

*b) Teachers working in private higher secondary schools*

**For the teachers working in private higher secondary schools there are 30 major instructional problems belonging to the eight areas. Out of these 10 problems are related with library (33.3%), 6 problems are related with academic matters (20%), 5 problems are related with building & furniture (16.6%), 3 problems are related with physical education (10%), 2 problems each are related with computer, audio visual aids and laboratory (6.7%), There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (98.33%)**

**2. Lack of separate reading room (94.17%)**

**3. Inadequate room size for library (87.50%)**

**4. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (86.67%).**

**5. Improper ventilation and lighting in library (85.83%)**

**6. Lack of separate seating arrangements for teachers (83.33%).**

**7. Lack of purchase of books, journals etc. demanded by teachers (79.16%).**

**8. Inadequate number of general books (78.33%).**

**9. Non-availability of separate library for higher secondary section (65%).**

**10. Lack of provision for taking books to home by students (61.67%).**

Laboratory

**1. Lack of language laboratory (100%).**

**2. Lack of adequate room size for laboratory (52.50%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (94.16%).**

**2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (80%).**

**3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (77.50%).**

**4. Lack of opportunity for providing real experience to students (75%).**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (70%).**

**6. Overloaded curriculum (56.67%).**

Building & Furniture

**1. Lack of additional room for language classes (90.83%).**

**2. Lack of classrooms of prescribed norms (63.33%)**

**3. Classrooms without roofs impervious to heat (60.83%)**

**4. Classrooms without proper ventilation (53.33%)**

**5. Classrooms without proper electric connection (51.67%).**

Physical Education

**1. Lack of separate physical education teachers (84.17%)**

**2. Lack of sufficient number of periods for physical education (70.83%).**

**3. Lack of sufficient sports materials like volleyball, football etc. (67.50%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (79.16%).**

**2. Lack of adequate number of study aids (55%).**

Computer

**1. Computer without internet connections (64.17%).**

**2. Lack of well equipped computer room (50.83%)**

IV. Major Instructional Problems of Higher Secondary School Teachers Based on Teaching Experience

*a) Guest Teachers*

**For the guest teachers working in higher secondary schools there are 51 major instructional problems. Out of these, 12 problems are related with library (23.6%), 10 problems each are related with laboratory and building &furniture (19.6%), 9 problems are related with academic matters (17.7%), 4 problems are related with audio visual aids (7.9%), 3 problems each are related with computer and physical education (5.8%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (100%)**

**2. Non-availability of separate library for higher secondary section (94.87%).**

**3. Improper ventilation and lighting in library (94.85%)**

**4. Lack of separate reading room (94.84%)**

**5. Lack of separate seating arrangements for teachers (94.80%).**

**6. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (92.30%).**

**7. Inadequate number of general books (89.74%).**

**8. Inadequate room size for library (89.74%)**

**9. Lack of purchase of books, journals etc. demanded by teachers (87.17%).**

**10. Lack of provision for taking books to home by students (87.17%).**

**11. Inadequacy of handbooks and source books of concerned subjects (69.23%).**

**12. Lack of provision for taking books to home by teachers (66.60%).**

Laboratory

**1. Lack of language laboratory (100%).**

**2. No separate laboratory assistant (97.43%)**

**3. Lack of fully qualified laboratory assistant (97.43%).**

**4. Lack of adequate room size for laboratory (94.87%).**

**5. Improper maintenance of laboratory (89.74%).**

**6. Inadequacy of laboratory equipments for each science subjects (89.74%).**

**7. Laboratory rooms without proper seating arrangements for teachers and students (87.17%).**

**8. Inadequate quantity of consumables in the laboratory (84.61%)**

**9. Inadequacy of work shelves and work tables in the laboratory (84.61%).**

**10. Lack of separate room for laboratory for each science subjects (76.92%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (97.43%).**

**2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (94.87%).**

**3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (94.87%).**

**4. Lack of opportunity for providing real experience to students (92.30%)**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (87.17%).**

**6. Lack of extra remuneration for remedial coaching classes (84.60%).**

**7. Difficulty due to change in medium of instruction into english (71.80%).**

**8. Difficulty in preparation due to lack of sufficient holidays in a week (69.23%).**

**6. Overloaded curriculum (51.28%).**

Building & Furniture

**1. Lack of additional room for language classes (94.87%).**

**2. Lack of classrooms of prescribed norms (92.30%)**

**3. Lack of building of pucca construction (87.19%).**

**4. Classrooms without proper electric connection (87.17%).**

**5. Lack of adequate number of benches and desks in classrooms for students (79.48%)**

**6. Lack of adequate number of classrooms (76.94%)**

**7. Classrooms without proper ventilation (76.92%)**

**8. Lack of sufficient furniture in classroom for teachers (68.23%)**

**9. Classrooms without roofs impervious to heat (58.97%).**

**10. Lack of separate building for higher secondary section (56.41%).**

Physical Education

**1. Lack of separate physical education teachers (100%)**

**2. Lack of sufficient number of periods for physical education (82.05%).**

**3. Lack of sufficient sports materials like volleyball, football etc. (71.79%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (94.89%).**

**2. Lack of adequate number of study aids (79.48%).**

**3. Lack of quality chalk board (69.23%).**

**4. Lack of necessary appliances for teaching crafts (64.10%)**

Computer

**1. Lack of well equipped computer room (66.68%)**

**2. Computer without internet connection (66.66%).**

**3. Lack of separate computer room for higher secondary section (56.41%)**

*b) Teachers with below ten years experience*

**For the higher secondary school teachers with below ten years experience, there are 30 major instructional problems belonging to the eight areas. Out of these 10 problems are related with library (33.3%), 6 problems are related with academic matters (20%), 5 problems are related with building & furniture (16.7%), 3 problems each are related with physical education and audio visual aids (10%), 2 problems each are related with laboratory (6.7%), 1 problem is related with computer (3.3%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (98.36%)**

**2. Lack of separate reading room (95.08%)**

**3. Inadequate room size for library (88.52%)**

**4. Improper ventilation and lighting in library (86.06%)**

**5. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (85.24%).**

**6. Lack of separate seating arrangements for teachers (84.42%).**

**7. Lack of purchase of books, journals etc. demanded by teachers (78.68%%).**

**8. Inadequate number of general books (77.04%).**

**9. Non-availability of separate library for higher secondary section (70.49%).**

**10. Lack of provision for taking books to home by students (59.01%).**

Laboratory

**1. Lack of language laboratory (100%).**

**2. Lack of adequate room size for laboratory (59.83%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (91.80%).**

**2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (77.04%)**

**3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (77.04%).**

**4. Lack of opportunity for providing real experience to students (75.40%)**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (72.13%).**

**6. Overloaded curriculum (54.91%).**

Building & Furniture

**1. Lack of additional room for language classes (91.80%).**

**2. Classrooms without roofs impervious to heat (63.93%)**

**3. Lack of classrooms of prescribed norms (62.29%)**

**4. Classrooms without proper electric connection (57.37%)**

**5. Classrooms without proper ventilation (53.27%)**

Physical Education

**1. Lack of separate physical education teacher (82.78%)**

**2. Lack of sufficient number of periods for physical education (70.49%).**

**3. Lack of sufficient sports materials like volleyball, football etc. (70.49%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (83.60%).**

**2. Lack of adequate number of study aids (63.93%).**

**3. Lack of necessary appliances for teaching crafts (56.55%)**

Computer

**1. Computer without internet connection (60.65%).**

*c) Teachers with more than ten years experience*

**For the higher secondary school teachers with more than ten years experience there are 43 major instructional problems. Out of these 12 problems are related with library (27.9%), 8 problems each are related with laboratory and building and furniture (18.6%), 6 problems are related with academic matters (13.9%), 4 problems are related with physical education facilities (9.3%), 3 problems are related with audio visual aids (6.9%), 2 problems are related with computer (4.8%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (100%)**

**2. Inadequate room size for library (96%)**

**3. Lack of separate reading room (96%)**

**4. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (94%).**

**5. Improper ventilation and lighting in library (94%)**

**6. Inadequate number of general books (86%).**

**7. Lack of purchase of books, journals etc. demanded by teachers (86%).**

**8. Lack of separate seating arrangements for teachers (84%).**

**9. Non-availability of separate library for higher secondary section (80%).**

**10. Lack of provision for taking books to home by students (70%).**

**11. Inadequacy of handbooks and source books of concerned subjects (62%).**

**12. Lack of provision for taking books to home by teachers (52%).**

Laboratory

**1. Lack of language laboratory (100%).**

**2. Lack of adequate room size for laboratory (78%).**

**3. Lack of fully qualified laboratory assistant (62%).**

**4. No separate laboratory assistant (60%)**

**5. Improper maintenance of laboratory (60%).**

**6. Inadequacy of work shelves and work tables in the laboratory (54%).**

**7. Inadequacy of laboratory equipments for each science subjects (52%).**

**8. Inadequate quantity of consumables in the laboratory (52%)**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (88%).**

**2. Lack of opportunity for providing real experience to students (84%)**

**3. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public examination (76%).**

**4. Lack of clear cut directions from the authority for executing projects, seminars etc. (70%).**

**5. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (70%).**

**6. Overloaded curriculum (56%).**

Building & Furniture

**1. Lack of additional room for language classes (96%).**

**2. Lack of classrooms of prescribed norms (78%)**

**3. Classrooms without roofs impervious to heat (70%).**

**4. Classrooms without proper ventilation (64%)**

**5. Classrooms without proper electric connection (58%).**

**6. Lack of adequate number of classrooms (54%)**

**7. Lack of sufficient furniture in classroom for teachers (52%)**

**8. Lack of adequate number of benches and desks in classrooms for students (50%)**

Physical Education

**1. Lack of separate physical education teachers (92%)**

**2. Lack of sufficient sports materials like volleyball, football etc. (80%).**

**3. Lack of sufficient number of periods for physical education (72%).**

**4. Non-availability of quality playground (58%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (86%).**

**3. Lack of necessary appliances for teaching crafts (62%)**

**3. Lack of adequate number of study aids (60%).**

Computer

**1. Computers without internet connection (74%)**

**2. Lack of well equipped computer room (70%)**

V. Major Instructional Problems of Higher Secondary School Teachers Based on Area of Specialisation

*a) Arts teachers*

**For the teachers handling arts subjects in higher secondary schools there are 33 major instructional problems. Out of these 11 problems are related with library (33.3%), 7 problems are related with buildings and furniture (21.2%), 5 problems are related with academic matters (15.3%), 4 problems are related with audio visual aids (12.1%), 3 problems are related with physical education (9.1%), 2 problems are related with computer (6%), 1 problem is related with laboratory (3%). There is no major instructional problem related with school location. Area-wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (98.86%)**

**2. Lack of separate reading room (95.45%)**

**3. Improper ventilation and lighting in library (89.77%)**

**4. Inadequate room size for library (89.76%)**

**5. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (87.50%).**

**6. Lack of separate seating arrangements for teachers (85.22%).**

**7. Lack of purchase of books, journals etc. demanded by teachers (82.95%).**

**8. Non-availability of separate library for higher secondary section (78.40%).**

**9. Inadequate number of general books (75.13%).**

**10. Lack of provision for taking books to home by students (64.77%).**

**11. Inadequacy of handbooks and source books of concerned subjects (52.27%).**

Laboratory

**1. Lack of language laboratory (100%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (90.90%).**

**2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (79.54%)**

**3. Lack of opportunity for providing real experience to students (79.54%)**

**4. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (76.13%).**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (73.86%).**

Building & Furniture

**1. Lack of additional room for language classes (93.18%).**

**2. Lack of classrooms of prescribed norms (72.72%)**

**3. Classrooms without proper electric connection (62.50%)**

**4. Classrooms without roofs impervious to heat (60.22%)**

**5. Classrooms without proper ventilation (56.81%)**

**6. Lack of adequate number of benches and desks in classroom for students (51.27%).**

**7. Lack of sufficient furniture in classroom for teachers (50%).**

Physical Education

**1. Lack of separate physical education teacher (93.18%)**

**2. Lack of sufficient sports materials like volleyball, football etc. (71.59%).**

**3. Lack of sufficient number of periods for physical education (66.90%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector etc. (86.50%).**

**2. Lack of adequate number of study aids (65.90%).**

**3. Lack of necessary appliances for teaching crafts (61.50%)**

**4. Lack of quality chalk board (50%).**

Computer

**1. Computer without internet connection (68.18%).**

**2. Lack of well equipped computer room (57.95%)**

*b) Commerce teachers*

**For the teachers handling commerce subjects in higher secondary schools there are 33 major instructional problems. Out of these 12 problems are related with library (36.4%), 6 problems each are related with building and furniture and academic matters (18.2%), 4 problems are related with physical education (12.1%), 3 problems are related with audio visual aids (9.1%), 2 problems are related with computer (6%). There is no major instructional problem related with school location and laboratory. Area-wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (97.28%)**

**2. Lack of separate reading room (96.22%)**

**3. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (94.44%).**

**4. Inadequate room size for library (92.66%)**

**5. Lack of separate seating arrangements for teachers (86.11%).**

**6. Inadequate number of general books (83.35%).**

**7. Improper ventilation and lighting in library (83.33%)**

**8. Lack of purchase of books, journals etc. demanded by teachers (80.59%).**

**9. Lack of provision for taking books to home by students (80.58%)**

**10. Non-availability of separate library for higher secondary section (75%).**

**11. Lack of provision for taking books to home by teachers (61.11%)**

**12. Inadequacy of handbooks and source books of concerned subjects (55.68%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (97.22%).**

**2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (91.66%)**

**3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (86.11%).**

**4. Lack of opportunity for providing real experience to students (83.33%)**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (77.77%).**

**6. Overloaded curriculum (55.55%)**

Building & Furniture

**1. Lack of additional room for language classes (88.88%).**

**2. Lack of classrooms of prescribed norms (77.77%)**

**3. Classrooms without roofs impervious to heat (75%)**

**4. Classrooms without proper electric connection (63.88%)**

**5. Classrooms without proper ventilation (59.99%)**

**6. Lack of adequate number of benches and desks in classroom for students (50%).**

Physical Education

**1. Lack of separate physical education teachers (90.66%)**

**2. Lack of sufficient number of periods for physical education (80.55%).**

**3. Lack of sufficient sports materials like volleyball, football etc. (69.44%).**

**4. Non-availability of quality playground (55.59%)**

Audio Visual Aids

**1. Lack of adequate number of study aids (72.22%).**

**2. Lack of necessary appliances for teaching crafts (61.11%)**

**3. Non-availability of necessary audio visual aids such as OHP, slide projector etc. (55.55%).**

Computer

**1. Computer without Internet Connection (88.88%).**

**2. Lack of well equipped computer room (80.55%)**

*c) Science teachers*

**For the teachers handling science subjects in higher secondary schools, there are 35 major instructional problems. Out of these 11 problems are related with library (31.4%), 6 problems each are related with academic matters and laboratory (17.1%), 5 problems are related with building & furniture (14.3%), 3 problems each are related with physical education and audio visual aids (8.6%) and 1 problems is related with computer (2.9%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.**

Library

**1. Lack of separate librarian (100%)**

**2. Lack of separate reading room (94.25%)**

**3. Improper ventilation and lighting in library (93.10%)**

**4. Inadequate room size for library (88.50%)**

**5. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (88.50%).**

**6. Inadequate number of general books (86.20%).**

**7. Lack of separate seating arrangements for teachers (86.20%).**

**8. Lack of purchase of books, journals etc. demanded by teachers (83.90%).**

**9. Non-availability of separate library for higher secondary section (75.86%).**

**10. Lack of provision for taking books to home by students (64.36%)**

**11. Inadequacy of handbooks and source books of concerned subjects (51.72%).**

Laboratory

**1. Lack of language laboratory (100%).**

**2. Lack of adequate room size for laboratory (68.96%).**

**3. Improper maintenance of laboratory (59.77%).**

**4. Inadequacy of workshelves and worktables in laboratory (56.32%).**

**5. Lack of fully qualified laboratory assistant (52.87%).**

**6. Inadequate quantity of consumables in laboratory (51.72%).**

Academic Matters

**1. Lack of provision for teachers to participate in refresher programmes (93.10%).**

**2. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (80.45%).**

**3. Lack of opportunity for providing real experience to students (80.45%)**

**4. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (78.16%)**

**5. Lack of clear cut directions from the authority for executing projects, seminars etc. (72.41%).**

**6. Overloaded curriculum (67.81%)**

Building & Furniture

**1. Lack of additional room for language classes (96.54%).**

**2. Lack of classrooms of prescribed norms (70.11%)**

**3. Classrooms without roofs impervious to heat (70.11%)**

**4. Classrooms without proper ventilation (64.36%)**

**5. Classrooms without proper electric connection (63.21%)**

Physical Education

**1. Lack of separate physical education teacher (88.50%)**

**2. Lack of sufficient number of periods for physical education (77.01%).**

**3. Lack of sufficient sports materials like volleyball, football etc. (75.86%).**

Audio Visual Aids

**1. Non-availability of necessary audio visual aids such as OHP, slide projector (87.35%).**

**2. Lack of adequate number of study aids (65.51%).**

**3. Lack of necessary appliances for teaching crafts (57.47%)**

Computer

**1. Computer without internet connection (55.17%).**

VI. Disparities in the Major Instructional Problems of Higher Secondary School Teachers Based on Locale of the School

**When the major instructional problems of teachers were compared based on locale of the school, it was found that there are 34 major instructional problems common to teachers of rural and urban higher secondary schools. Where as 3 major problems occurring only among teachers of rural schools and 4 major problems occurring only among teachers of urban schools. In the 3 problems which are occurring only among rural teachers, 1 problem is related with library and 2 problems are related with laboratory. These problems are listed below according to their order and seriousness.**

Library

**1. Inadequacy of hand books and source books of concerned subjects (59.52%).**

Laboratory

**1. Inadequate quantity of consumables in laboratory (54.16%).**

**2. Improper maintenance of laboratory (63.49%).**

 **In the 4 major problems which are occurring only to teachers of urban schools, 2 problems are related with building and furniture and 1 problem each are related with school location and physical education.**

 **These problems are listed below according to their order and seriousness.**

Building & Furniture

**1. Lack of adequate number of classrooms (52.94%).**

**2. Lack of adequate number of benches and desks in classroom for students (50.58%).**

School location

**1. School is in congested area (55.29%).**

Physical Education

**1. Non-availability of quality playground**

VII. Disparities in the Major Instructional Problems of Higher Secondary School Teachers Based on Type of School Management

 **When the major instructional problems of teachers were compared based on type of school management, it was found that 30 major instructional problems are common to teachers of both government and private higher secondary schools. Where as 18 major problems occurring only to teachers of government schools and there is no major instructional problem occurring specifically to teachers of private schools. In the 18 problems which are occurring only to teachers working government schools, 8 problems are related with laboratory, 4 problems are related with building and furniture, 2 problems each are related with audio visual aids and library, 1 problem each are related with academic matters and physical education.**

 **These problems are listed below according to their order and seriousness.**

Laboratory

**1. No separate laboratory assistant (100%).**

**2. Lack of fully qualified laboratory assistant (100%).**

**3. Improper maintenance of laboratory (90.11%).**

**4. Inadequacy of work shelves and worktables in laboratory (85.71%).**

**5. Inadequate quantity of consumables in laboratory (81.42%).**

**6. Inadequacy of laboratory equipments for each science subjects (81.32%).**

**7. Laboratory rooms without proper seating arrangements for teachers and students (80.22%).**

**8. Lack of separate room for laboratory for each science subjects (58.24%).**

Building and Furniture

**1. Lack of adequate number of benches and desks in classroom for students (83.51%).**

**2. Lack of sufficient furniture in classroom for teachers (73.62%).**

**3. Lack of adequate number of classrooms (67.03%).**

**4. Lack of building of pucca construction (63.73%).**

Audio visual Aids

**1. Lack of necessary appliances for teaching crafts (78.02%).**

**2. Lack of quality chalk board (66.03%)**

Library

**1. Inadequacy of hand books and source books of concerned subjects (69.23%).**

**2. Lack of provision for taking books to home by teachers (54.94%).**

Academic Matters

**1. Lack of extra remuneration for remedial coaching classes (50.54%).**

Physical Education

**1. Non-availability of quality play ground (50.55%).**

 **There is no major instructional problem specific to teachers working in private higher secondary schools.**

VIII. Disparities in the Major Instructional Problems of Higher Secondary School Teachers Based on Teaching Experience

 **When the major instructional problems of teachers were compared based on teaching experience, it was found that 30 major instructional problems are common to guest teachers, teachers with below ten years experience and teachers with more than ten years experience. Where as 9 problems occurring only to guest teachers, 1 problem occurring only to teachers with more than ten years experience and there is no major instructional problem occurring specifically to teachers with below ten years experience. In the 9 problems occurring specifically to guest teachers, 3 problems are related with academic matters, 2 problems each are related with building and furniture and laboratory, 1 problem each are related with computer and audio visual aids. These problems are listed below according to their order and seriousness.**

Academic Matters

**1. Lack of extra remuneration for remedial coaching classes (84.60%).**

**2. Difficulty due to change in medium of instruction into english (71.80%).**

**3. Difficulty in preparation due to lack of sufficient holidays in a week (69.23%).**

Building and Furniture

**1. Lack of building of pucca construction (87.19%).**

**2. Lack of separate building for higher secondary section (56.41%).**

Laboratory

**1. Lack of separate room for laboratory for each science subjects (76.92%).**

**2. Laboratory rooms without proper seating arrangements for teachers and students (87.17%).**

Computer

**1. Lack of separate computer room for higher secondary section (56.41%).**

Audio Visual Aids

**1. Lack of quality chalkboard (69.23%).**

 **The problem occurring only to teachers with more than ten years experience is related with physical education. The problem is listed below.**

Physical Education

**1. Non-availability of quality play ground (58%).**

 **There is no major instructional problem specific to teachers with below ten years experience.**

IX. Disparities in the Major Instructional Problem of Higher Secondary School Teachers Based on Area of Specialisation

 **When the major instructional problems of teachers were compared based on area of specialisation, it was found that 28 major instructional problems are common to arts, commerce and science teachers. Where as 2 problems occurring only to arts teachers, 2 problems occurring only to commerce teachers, and 5 problems occurring only to science teachers. In the 2 problems occurring specifically to arts teachers, 1 problem each are related with audio visual aids and building and furniture. These problems are listed below according to their order and seriousness.**

Audio visual Aids

**1. Lack of quality chalk board (50%).**

Building and Furniture

**1. Lack of sufficient furniture in classroom for teachers (50%).**

 **In the 2 problems occurring specifically to commerce teachers, 1 problem is related with library and 1 problem is related with physical education. These problems are listed below according to their order and seriousness.**

Library

**1. Lack of provision for taking books to home by teachers (61.11%).**

Physical Education

**1. Non-availability of quality playground (55.59%).**

 **The problems occurring specifically to science teachers is related with laboratory.**

Laboratory

**1. Inadequacy of work shelves and work tables in the laboratory (56.32%).**

**2. Lack of adequate room size for laboratory (68.96%).**

**3. Lack of fully qualified laboratory assistant (52.87%).**

**4. Improper maintenance of laboratory (59.77%).**

**5. Inadequate quality of consumables in laboratory (51.72%).**

TENABILITY OF THE HYPOTHESIS

 **The tenability of the hypothesis set for the study was examined in the light of the findings. The hypothesis states that there will be considerable difference in the major instructional problems faced by higher secondary school teachers based on,**

 **(i) Locale of the School**

 **(ii) Type of School Management**

 **(iii) Teaching Experience**

 **(iv) Area of Specialisation**

 **The findings of the study revealed that the hypothesis is not fully substantiated.**

Educational Implications

 **The two fold objectives of the present study were to find out the major instructional problems faced by higher secondary school teachers based on locale of the school, type of school management, teaching experience and area of specialisation and to examine whether there is considerable difference in the major instructional problems based on subsamples. The investigator took this study with the hope that the instructional problems faced by higher secondary school teachers can be identified and that there by the knowledge of these instructional problems will help the teachers, government and school authorities to give proper attention for improving it and thereby leading to the betterment of quality of education.**

 **Based on the findings of the study the investigator suggests following remedies to reduce the intensity of instructional problems faced by higher secondary school teachers.**

**1. A separate library meant for higher secondary section is to be established. Separate reading room for teachers, sufficient number of journals, news papers, magazines are to be provided in the library. Also steps are to be taken for the appointment of separate librarian for higher secondary section.**

**2. With the view to improve the standard of english language among teachers and students, a language laboratory is to be set up in schools.**

**3. Necessary laboratory equipments, specimens, consumables, work shelves, worktables is to be ensured in the laboratory. In addition, a separate laboratory assistant may be appointed to enable the teachers to provide more attention to students in the laboratory.**

**4. For the final evaluation of the performance of students in higher secondary course, the performance of the students in the plus one class also is to be assessed.**

**5. Curriculum is to be made more interesting and activity oriented for effective transaction of subject matter by the teachers.**

**6. Proper guidelines is to be given to the teachers regarding the projects to be conducted in various subjects among students.**

**7. Faculty improvement programmes are to be frequently organized for improving the quality of teachers.**

**8. Availability of sufficient number of computers with internet connection is to be ensured to help teachers to get and provide up-to-date information in their respective subjects.**

**9. Audio visual aids like over head projector, slide projector, television, globes, maps etc. are to be made available in the school**

**10. School is to be situated in a congenial and peaceful environment with the proper infrastructure.**

**11. Physical education is to be given stress with sufficient number of periods in the time table, appointment of physical education teachers and availability of sports equipments in the school.**

SUGGESTIONS FOR FURTHER RESEARCH

 **The findings of the study helped the investigator to suggest the following areas for further research.**

**1. A study on instructional problems faced by the teachers working in different stages of education can be done.**

**2. A detailed study on different areas of instructional problems faced by higher secondary school teachers can be conducted.**

**3. A study of different teaching strategies for the effective transaction of curriculum can be conducted.**

S U M M A R Y

 National development of a society is closely linked with the system of education of the land. Education has been considered as the most important input for the development of an individual, society and nation. That is, educational institutions provide the foundation on which strong nations are built.

 Education is a process of development from infancy to maturity, process by which a child adopts himself gradually in various ways of his physical and psychological environment. It aims at shaping the behaviour of the students in a desirable way and bringing about all round development in their personality. It helps the students to develop into highly evolved and morally oriented human beings. Thus an effective system of education should invigorate the learner to choose an area of specilisation in which he or she would prefer to pursue his or her potentialities to the fullest extent possible.

 Educational structure in all the countries, at different times of their history is quite important for its educational efforts.

 "Educational structure was differing from time to time during the long history of our country, depending upon:

 1. The needs of the nation.

 2. Requirements and aspiration of educands.

 3. Goals and purpose of education visualized.

 4. The social and cultural background of the country at a given
 point of time" (Murthy, 1986).

 The system of education in Kerala is categorised into four divisions viz., primary education, secondary education, higher secondary education and higher education. Since independence, the law envisages for Higher Secondary education in India. It has a vital contribution towards the preparation of human resource harvestation in the nation. The need to a uniform educational structure came to be increasingly felt by one-and-all concerned with the educational phenomenon. The new pattern of Higher Secondary education was evolved in our country. It is also known as plus two system of education. Higher Secondary education has two streams; academic stream and vocational stream.

 These two streams of education are introduced from the plus two stage of education. Higher Secondary education is a preparatory course for those who want to pursue higher education and terminal course for those who wish to complete their education and enter the world of work by pursuing the vocational stream. In the dawn of Independence we were having Pre University Course, which later became Predegree attached to college. Recently the plus two system of education is provided.

 The manifest functions or widely accepted and intended consequences of this scheme of structural change in school education are:

1. To link education with productivity.

2. To improve the quality of education.

3. To provide such knowledge to the students which is relevant to their actual life as much as possible.

4. To bring about harmonious development of pupils personality (Desai, 1975).

 Higher secondary education plays a significant role in achieving these manifest functions which ultimately helps in improving the quality of education and thereby facilitate for the total development of nation.

# NEED AND SIGNIFICANCE

 The recommendations of different educational commissions and committees especially the recommendation of National Policy on Education (1986), Higher Secondary Course was introduced in Kerala from the year 1990 and there is need to effect changes to make the course purposeful.

 One of the crucial problems haunting the post-independent scenario of the state was the delinking of predegree from the colleges of Kerala and the emerging problems with the inception of higher secondary schools. Though government has made higher secondary education as part of school education, they faced lot of problems during its implementation stage and till now it is not free from the dilemma as it faced in its child age. Without removing these hurdles, government continues adding number to the list of higher secondary schools. Different educational experts, teachers, political parties have expressed their deep concern over the pathetic condition of higher secondary schools due to lack of educational facilities, quality teachers etc.

 Higher Secondary education has an important place in the ladder of education. It is a preparatory course for academically disposed students because it leads to a three year degree course and terminal course serving as a stepping stone to careers in life. Therefore effective instruction should be provided by teachers at this stage. Any difficulty in providing proper instruction will affect the future of students.

 Higher Secondary schools in Kerala are run under different syllabus. Now-a-days a general notion has been formed among the parents that CBSE schools have greater infrastructural facilities when compared to state run schools. This forced the parents to send their children to CBSE schools.

 The strength of our nation depends on the teachers ability to rear highly educated, responsible, well adjusted youth who will step forward when the adult generation passes on to retirement. Teacher plays a major role in moulding younger generation. They should have thorough knowledge of subject matter, new ideas and informations regarding their area of specialisation, use of audio visual aids etc. Faculty improvement programmes, seminars, workshops etc. should be organized for improving their subject competencies. But these are very meagre at higher secondary level. Authorities are silent regarding the need of providing refresher programmes for teachers. This acts as hindrance for the higher secondary school teachers for providing effective instruction to their students. Studies reported that the teachers are facing instructional problems due to lack of effective reference library, sufficient amount of teaching materials, audio visual aids, inservice training programmes etc. (Patil, 1985 and Patnekar, 1998).

 Another crucial problem faced by higher secondary school teachers are related with the examination pattern of plus one classes. Students are taking lesser interest in plus one classes, since their plus one marks are not considered in the final exam and they have no bearing on their admission to higher studies. More attention is diverted to coaching classes.

 The recognition is given to schools by the government as per the stipulated norms in the Kerala Education Rule. But teachers are facing a challenging situation, when the same schools are found bereft of these facilities.

 Teachers' ability alone is not sufficient to mould the destiny of future generation. Besides these, educational institution must have well equipped infrastructural facilities for improving the quality of education. Just like blood is an essential element for the proper functioning of body, infrastructure is a key factor for achieving the educational objectives.

 According to the Kerala Education Rule (Government of Kerala, 1997), educational institutions has well established norms regarding infrastructure. These norms are applicable to higher secondary schools also. Kerala Education Rule directs that there should be separate building for higher secondary section, laboratory for different science subjects, class rooms of adequate size (9 m x 6 m x 3.7 m), additional room for language classes etc. Norms also insist on having sufficient number of computers, necessary audio visual aids, separate laboratory and library assistants, quality playground etc. But most of the higher secondary schools does not have adequate facilities. Studies disclosed that the existing condition of libraries and laboratories are pathetic. The working condition of audio visual aids are very poor and in some government schools, teachers are placed in charge of library (Mittal, 1990 and Urmil, 1994).

 A study conducted in Kerala also reveal that there is positive relationship among three components of a school system. Viz., infrastructure, academic standards and school performance (Moorthy, 1999).

 The investigator from her personal experience also found that many higher secondary schools are confronting with these handicaps which are cited earlier. In the light of these, the present study aims to find out major instructional problems faced by higher secondary school teachers and to know whether these instructional problems differ between teachers according to their teaching experience, locality of the school, type of school management and area of specialisation. An understanding of these instructional problems faced by higher secondary school teachers will help school authorities and government in solving it and thereby help for improvement in the quality of education.

# STATEMENT OF THE PROBLEM

 The problem under study is entitled as "INSTRUCTIONAL PROBLEMS FACED BY HIGHER SECONDARY SCHOOL TEACHERS".

# DEFINITION OF KEY TERMS

**1. Instructional Problems**

 For this study 'Instructional Problems' are the problems faced by the higher secondary school teachers in their instruction. These Problems are related with school location, building and furniture, library, laboratory, academic matters, computers, physical education, audio visual aids etc.

**2. Higher Secondary School Teachers**

 For the present study 'Higher Secondary School Teachers' are the teachers who are teaching at XI, XII classes.

# VARIABLE OF THE STUDY

 The variable of the study is 'Instructional Problems of Higher Secondary School Teachers'.

# OBJECTIVES

 The objectives set forth for the study are the following.

1. To identify the major instructional problems faced by higher secondary school teachers for the total sample and subsamples based on,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

2. To examine whether there is considerable difference in the major instructional problems identified for the higher secondary school teachers based on,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

## HYPOTHESIS

 The hypothesis set for the study was

 There will be considerable difference in the major instructional problems based on ,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

# METHODOLOGY

 Methodology deals with the precise description of sample used for the study, tool and statistical technique used.

**Sample**

 The study was conducted on a sample of 211 teachers drawn from 44 higher secondary schools located in Kozhikode district using stratified sampling technique. The sample was selected by giving due representation to the different strata viz., locale of the school, type of school management, teaching experience and area of specialisation.

# Tool used for the study

 To measure the only variable of the study 'Instructional problems of higher secondary school teachers' the investigator developed a tool viz., "Instructional Problem Inventory for Higher Secondary School Teachers" (2005) in collaboration with the supervising teacher.

# Statistical Technique Used

 Statistical technique used for the analysis of the data is,

 Estimation of Percentages.

# SCOPE AND LIMITATIONS

 The present study is to identify the major instructional problems of higher secondary school teachers. The study was conducted on a sample of 211 teachers of higher secondary schools belonging to 44 educational institutions of Kozhikode district. In selecting the sample due representation was given to all the subsamples viz., locale of the school, type of school management, teaching experience and area of specialisation. Eventhough much precaution were taken to make the study as accurate as possible there are certain limitations also. Some of these are,

1. The sample is selected from government and aided higher secondary schools only. Unaided schools are not included in the sample.

2. The sample of the study is confined to only one district viz., Kozhikode due to time constraint.

3. Only those problems which occured in at least 50% of the sample were considered as major instructional problems.

 Inspite of the above limitations, the investigator has attempted to make the data as objective and valid as possible and hopes that the findings of the study will yield fruitful results. This will be useful to administrators, school authorities, government and others concerned in the field of education.

**MAJOR FINDINGS OF THE STUDY**

 The major findings of the study are summarised as follows:

**I. Major Instructional Problems of Higher Secondary School Teachers**

 For the total sample there are 37 major instructional problems belonging to the eight areas viz., school location, building and furniture, library, laboratory, academic matters, computer, physical education and audio visual aids. Out of these 37 major instructional problems, 12 problems are related with library (32.4%), 6 problems each are related with laboratory and academic matters (16.2%), 5 problems are related with building & furniture (13.6%), 3 problems each are related with physical education and audio visual aids (8.1%), 2 problems are related with computer (5.4%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate reading room (95.26%)

2. Lack of separate librarian (94.31%)

3. Inadequate room size for library (90.52%).

4. Improper ventilation and lighting in library (90.04%).

5. Lack of sufficient number of reference books journals, newspapers, magazines for concerned subjects (89.09%).

6. Lack of separate seating arrangements for teachers (85.78%).

7. Lack of purchase of books, journals etc. demanded by teachers (82.93%).

8. Inadequate number of general books (81.51%).

9. Non-availability of separate library for higher secondary section (76.77%).

10. Lack of provision for taking books to home by students (67.29%).

11. Inadequacy of hand books and source books of concerned subjects (52.60%).

12. Lack of provision for taking books to home by teachers (50.71%).

**Laboratory**

1. Lack of language laboratory (100%)

2. Lack of adequate room size for laboratory (70.14%).

3. Lack of fully qualified laboratory assistant (57.34%).

4. Improper maintenance of laboratory (57.34%).

5. No separate laboratory assistant (53.08%).

6. Inadequacy of workshelves and worktables in the laboratory (52.13%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (92.41%).

2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (81.04%).

3. Lack of opportunity for providing real experience to students (80.56%).

4. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (79.62%).

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (73.93%).

6. Overloaded curriculum (55.92%).

**Building and Furniture**

1. Lack of additional room for language classes (93.83%).

2. Lack of classrooms of prescribed norms (72.51%).

3. Classrooms without roofs impervious to heat (66.82%).

4. Classrooms without proper electric connection (63.03%).

5. Classrooms without proper ventilation (59.71%).

**Physical Education**

1. Lack of separate physical education teachers (90.99%).

2. Lack of sufficient sports materials like volleyball football etc. (72.98%).

3. Lack of sufficient number of periods for physical education (72.98%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (86.72%).

2. Lack of adequate number of study aids (66.82%).

3. Lack of necessary appliances for teaching crafts (60.18%).

**Computer**

1. Computers without internet connection (66.35%).

2. Lack of well equipped computer room (57.81%).

**II. Major Instructional Problems of Higher Secondary School Teachers Based on Locale of the School**

***a) Teachers working in rural higher secondary schools***

 For the teachers working in rural higher secondary schools there are 38 major instructional problems belonging to the eight areas viz., school location, building and furniture, library, laboratory, academic matters, computer, physical education and audio visual aids. Out of these 38 major instructional problems, 12 problems are related with library (31.6%), 7 problems are related with laboratory (18.4%), 6 problems are related with academic matters (15.8%), 5 problems are related with building & furniture (13.2%), 3 problems each are related with physical education and audio visual aids (7.9%), 2 problems are related with computer (5.2%). There is no major instructional problem related with school location. Area-wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (99.20%)

2. Lack of separate reading room (96.82%)

3. Improper ventilation and lighting in library (96.03%)

4. Inadequate room size for library (94.44%).

5. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (93.65%).

6. Lack of separate seating arrangements for teachers (92.06%).

7. Lack of purchase of books, journals etc. demanded by teachers (86.50%).

8. Non-availability of separate library for higher secondary section (83.33%).

9. Inadequate number of general books (81.74%).

10. Lack of provision for taking books to home by students (69.04%).

11. Inadequacy of hand books and source books of concerned subjects (59.52%).

12. Lack of provision for taking books to home by teachers (50%).

**Laboratory**

1. Lack of language laboratory (100%).

2. Lack of adequate room size for laboratory (69.04%).

3. Improper maintenance of laboratory (63.49)

4. Lack of fully qualified laboratory assistant (58.52%).

5. Inadequate quantity of consumables in laboratory (54.16%).

6. Inadequacy of work shelves and work tables in laboratory (53.17%).

7. No separate laboratory assistant (51.58%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (92.85%).

2. Lack of opportunity for providing real experience to students (82.53%).

3. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (81.74%).

4. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (79.36%).

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (74.60%).

6. Overloaded curriculum (59.52%).

**Building & Furniture**

1. Lack of additional room for language classes (95.23%).

2. Lack of classrooms of prescribed norms (76.19%).

3. Classrooms without roofs impervious to heat (69.84%).

4. Classrooms without proper ventilation (66.66%).

5. Classrooms without proper electric connection (53.96%).

**Physical Education**

1. Lack of separate physical education teacher (97.61%).

2. Lack of sufficient sports materials like volleyball, football etc. (71.42%).

3. Lack of sufficient number of periods for physical education (70.63%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (92.06%).

2. Lack of adequate number of study aids (73.80%).

3. Lack of necessary appliances for teaching crafts (62.69%).

**Computer**

1. Computer without internet connection (66.66%).

2. Lack of well equipped computer room (57.93%).

***b) Teachers working in urban higher secondary schools***

For the teachers working in urban higher secondary schools there are 38 major instructional problems. Out of these, 11 problems are related with library (28.9%), 6 problems each are related with building & furniture and academic matters (15.8%), 5 problems are related with laboratory (13.2%), 4 problems are related with physical education (10.5%), 3 problems are related with audio visual aids (7.8%) 2 problems are related with computer (5.3%) and 1 problem is related with school location (2.7%). Area wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (98.82%)

2. Lack of separate reading room (92.94%)

3. Improper ventilation and lighting in library (84.70%)

4. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (82.17%).

5. Improper ventilation and lighting in library (81.17%)

6. Inadequate number of general books (80.17%).

7. Lack of purchase of books, journals etc. demanded by teachers (77.64%).

8. Lack of separate seating arrangements for teachers (76.47%).

9. Non-availability of separate library for higher secondary section (66.05%).

10. Lack of provision for taking books to home by students (53.94%).

11. Lack of provision for taking books to home by teachers (51.76%).

**Laboratory**

1. Lack of language laboratory (100%).

2. Lack of adequate room size for laboratory (67.08%).

3. No separate laboratory assistant (55.29%).

4. Lack of fully qualified laboratory assistant (54.11%).

5. Inadequacy of work shelves and work tables in the laboratory (52.58%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (91.76%).

2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (80%).

3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (80%).

4. Lack of opportunity for providing real experience to students (77.64%).

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (72.94%).

6. Overloaded curriculum (50.58%).

**Building & Furniture**

1. Lack of additional room for language classes (91.76%).

2. Lack of classrooms of prescribed norms (67.06%).

3. Classrooms without roofs impervious to heat (62.50%).

4. Lack of adequate number of classrooms (52.94%)

5. Classrooms without proper electric connection (52.94%).

6. Lack of adequate number of benches and desks in classrooms for students (50.58%).

**Physical Education**

1. Lack of separate physical education teacher (81.17%)

2. Lack of sufficient number of periods for physical education (76.47%).

3. Lack of sufficient sports materials like volleyball, football etc. (75.29%).

4. Non-availability of quality playground (57.64%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (67.05%).

2. Lack of necessary appliances for teaching crafts (56.47%)

3. Lack of adequate number of study aids (56.47%).

**Computer**

1. Computer without internet connections (58.64%).

2. Lack of well equipped computer room (57.64%).

**School Location**

1. School is in congested area (55.29%).

**III. Major Instructional Problems of Higher Secondary School Teachers Based on Type of School Management**

***a) Teachers working in government higher secondary schools***

For the teachers working in government higher secondary schools there are 48 major instructional problems belonging to the eight areas. Out of these 48 major instructional problems, 12 problems are related with library (25%), 10 problems are related with laboratory (20.8%), 9 problems are related with building & furniture (18.8%), 7 problems are related with academic matters (14.6%), 4 problems each are related with physical education and audio visual aids (8.3%), 2 problems are related with computer (4.2%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (100%)

2. Lack of separate reading room (96.70%)

3. Improper ventilation and lighting in library (95.60%)

4. Inadequate room size for library (94.51%)

5. Non-availability of separate library for higher secondary section (92.31%).

6. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (92.31%).

7. Lack of separate seating arrangements for teachers (89.01%).

8. Lack of purchase of books, journals etc. demanded by teachers (87.91%).

9. Inadequate number of general books (86.71%).

10. Lack of provision for taking books to home by students (74.73%).

11. Inadequacy of handbooks and source books of concerned subjects (69.23%).

12. Lack of provision for taking books to home by teachers (54.94%).

**Laboratory**

1. No separate laboratory assistant (100%)

2. Lack of fully qualified laboratory assistant (100%).

3. Lack of language laboratory (100%).

4. Lack of adequate room size for laboratory (93.40%).

5. Improper maintenance of laboratory (90.11%).

6. Inadequacy of work shelves and work tables in the laboratory (85.71%).

7. Inadequate quantity of consumables in the laboratory (81.42%)

8. Inadequacy of laboratory equipments for each science subjects (81.32%).

9. Laboratory rooms without proper seating arrangements for teachers and students (80.22%).

10. Lack of separate room for laboratory for each science subjects (58.24%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (90.10%).

2. Lack of opportunity for providing real experience to students (87.91%).

3. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (82.42%).

4. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (82.42%).

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (79.12%).

6. Overloaded curriculum (54.95%).

7. Lack of extra remuneration for remedial coaching classes (50.54%).

**Building & Furniture**

1. Lack of additional room for language classes (97.80%).

2. Lack of classrooms of prescribed norms (84.62%)

3. Lack of adequate number of benches and desks in classrooms for students (83.51%).

4. Classrooms without proper electric connection (78.02%).

5. Classrooms without roofs impervious to heat (74.73%).

6. Lack of sufficient furniture in classroom for teachers (73.62%)

7. Classrooms without proper ventilation (68.13%)

8. Lack of adequate number of classrooms (67.03%)

9. Lack of building of pucca construction (63.73%).

**Physical Education**

1. Lack of separate physical education teachers (100%)

2. Lack of sufficient sports materials like volleyball, football etc. (80.22%).

3. Lack of sufficient number of periods for physical education (75.82%).

4. Non-availability of quality playground (50.55%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (96.70%).

2. Lack of adequate number of study aids (83.42%).

3. Lack of necessary appliances for teaching crafts (78.02%)

4. Lack of quality chalk board (66.03%).

**Computer**

1. Computer without Internet Connections (69.23%).

2. Lack of well equipped computer room (67.03%)

***b) Teachers working in private higher secondary schools***

For the teachers working in private higher secondary schools there are 30 major instructional problems belonging to the eight areas. Out of these 10 problems are related with library (33.3%), 6 problems are related with academic matters (20%), 5 problems are related with building & furniture (16.6%), 3 problems are related with physical education (10%), 2 problems each are related with computer, audio visual aids and laboratory (6.7%), There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (98.33%)

2. Lack of separate reading room (94.17%)

3. Inadequate room size for library (87.50%)

4. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (86.67%).

5. Improper ventilation and lighting in library (85.83%)

6. Lack of separate seating arrangements for teachers (83.33%).

7. Lack of purchase of books, journals etc. demanded by teachers (79.16%).

8. Inadequate number of general books (78.33%).

9. Non-availability of separate library for higher secondary section (65%).

10. Lack of provision for taking books to home by students (61.67%).

**Laboratory**

1. Lack of language laboratory (100%).

2. Lack of adequate room size for laboratory (52.50%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (94.16%).

2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (80%).

3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (77.50%).

4. Lack of opportunity for providing real experience to students (75%).

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (70%).

6. Overloaded curriculum (56.67%).

**Building & Furniture**

1. Lack of additional room for language classes (90.83%).

2. Lack of classrooms of prescribed norms (63.33%)

3. Classrooms without roofs impervious to heat (60.83%)

4. Classrooms without proper ventilation (53.33%)

5. Classrooms without proper electric connection (51.67%).

**Physical Education**

1. Lack of separate physical education teachers (84.17%)

2. Lack of sufficient number of periods for physical education (70.83%).

3. Lack of sufficient sports materials like volleyball, football etc. (67.50%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (79.16%).

2. Lack of adequate number of study aids (55%).

**Computer**

1. Computer without internet connections (64.17%).

2. Lack of well equipped computer room (50.83%)

**IV. Major Instructional Problems of Higher Secondary School Teachers Based on Teaching Experience**

***a) Guest Teachers***

For the guest teachers working in higher secondary schools there are 51 major instructional problems. Out of these, 12 problems are related with library (23.6%), 10 problems each are related with laboratory and building &furniture (19.6%), 9 problems are related with academic matters (17.7%), 4 problems are related with audio visual aids (7.9%), 3 problems each are related with computer and physical education (5.8%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (100%)

2. Non-availability of separate library for higher secondary section (94.87%).

3. Improper ventilation and lighting in library (94.85%)

4. Lack of separate reading room (94.84%)

5. Lack of separate seating arrangements for teachers (94.80%).

6. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (92.30%).

7. Inadequate number of general books (89.74%).

8. Inadequate room size for library (89.74%)

9. Lack of purchase of books, journals etc. demanded by teachers (87.17%).

10. Lack of provision for taking books to home by students (87.17%).

11. Inadequacy of handbooks and source books of concerned subjects (69.23%).

12. Lack of provision for taking books to home by teachers (66.60%).

**Laboratory**

1. Lack of language laboratory (100%).

2. No separate laboratory assistant (97.43%)

3. Lack of fully qualified laboratory assistant (97.43%).

4. Lack of adequate room size for laboratory (94.87%).

5. Improper maintenance of laboratory (89.74%).

6. Inadequacy of laboratory equipments for each science subjects (89.74%).

7. Laboratory rooms without proper seating arrangements for teachers and students (87.17%).

8. Inadequate quantity of consumables in the laboratory (84.61%)

9. Inadequacy of work shelves and work tables in the laboratory (84.61%).

10. Lack of separate room for laboratory for each science subjects (76.92%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (97.43%).

2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (94.87%).

3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (94.87%).

4. Lack of opportunity for providing real experience to students (92.30%)

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (87.17%).

6. Lack of extra remuneration for remedial coaching classes (84.60%).

7. Difficulty due to change in medium of instruction into english (71.80%).

8. Difficulty in preparation due to lack of sufficient holidays in a week (69.23%).

6. Overloaded curriculum (51.28%).

**Building & Furniture**

1. Lack of additional room for language classes (94.87%).

2. Lack of classrooms of prescribed norms (92.30%)

3. Lack of building of pucca construction (87.19%).

4. Classrooms without proper electric connection (87.17%).

5. Lack of adequate number of benches and desks in classrooms for students (79.48%)

6. Lack of adequate number of classrooms (76.94%)

7. Classrooms without proper ventilation (76.92%)

8. Lack of sufficient furniture in classroom for teachers (68.23%)

9. Classrooms without roofs impervious to heat (58.97%).

10. Lack of separate building for higher secondary section (56.41%).

**Physical Education**

1. Lack of separate physical education teachers (100%)

2. Lack of sufficient number of periods for physical education (82.05%).

3. Lack of sufficient sports materials like volleyball, football etc. (71.79%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (94.89%).

2. Lack of adequate number of study aids (79.48%).

3. Lack of quality chalk board (69.23%).

4. Lack of necessary appliances for teaching crafts (64.10%)

**Computer**

1. Lack of well equipped computer room (66.68%)

2. Computer without internet connection (66.66%).

3. Lack of separate computer room for higher secondary section (56.41%)

***b) Teachers with below ten years experience***

For the higher secondary school teachers with below ten years experience, there are 30 major instructional problems belonging to the eight areas. Out of these 10 problems are related with library (33.3%), 6 problems are related with academic matters (20%), 5 problems are related with building & furniture (16.7%), 3 problems each are related with physical education and audio visual aids (10%), 2 problems each are related with laboratory (6.7%), 1 problem is related with computer (3.3%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (98.36%)

2. Lack of separate reading room (95.08%)

3. Inadequate room size for library (88.52%)

4. Improper ventilation and lighting in library (86.06%)

5. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (85.24%).

6. Lack of separate seating arrangements for teachers (84.42%).

7. Lack of purchase of books, journals etc. demanded by teachers (78.68%%).

8. Inadequate number of general books (77.04%).

9. Non-availability of separate library for higher secondary section (70.49%).

10. Lack of provision for taking books to home by students (59.01%).

**Laboratory**

1. Lack of language laboratory (100%).

2. Lack of adequate room size for laboratory (59.83%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (91.80%).

2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (77.04%)

3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (77.04%).

4. Lack of opportunity for providing real experience to students (75.40%)

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (72.13%).

6. Overloaded curriculum (54.91%).

**Building & Furniture**

1. Lack of additional room for language classes (91.80%).

2. Classrooms without roofs impervious to heat (63.93%)

3. Lack of classrooms of prescribed norms (62.29%)

4. Classrooms without proper electric connection (57.37%)

5. Classrooms without proper ventilation (53.27%)

**Physical Education**

1. Lack of separate physical education teacher (82.78%)

2. Lack of sufficient number of periods for physical education (70.49%).

3. Lack of sufficient sports materials like volleyball, football etc. (70.49%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (83.60%).

2. Lack of adequate number of study aids (63.93%).

3. Lack of necessary appliances for teaching crafts (56.55%)

**Computer**

1. Computer without internet connection (60.65%).

***c) Teachers with more than ten years experience***

For the higher secondary school teachers with more than ten years experience there are 43 major instructional problems. Out of these 12 problems are related with library (27.9%), 8 problems each are related with laboratory and building and furniture (18.6%), 6 problems are related with academic matters (13.9%), 4 problems are related with physical education facilities (9.3%), 3 problems are related with audio visual aids (6.9%), 2 problems are related with computer (4.8%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (100%)

2. Inadequate room size for library (96%)

3. Lack of separate reading room (96%)

4. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (94%).

5. Improper ventilation and lighting in library (94%)

6. Inadequate number of general books (86%).

7. Lack of purchase of books, journals etc. demanded by teachers (86%).

8. Lack of separate seating arrangements for teachers (84%).

9. Non-availability of separate library for higher secondary section (80%).

10. Lack of provision for taking books to home by students (70%).

11. Inadequacy of handbooks and source books of concerned subjects (62%).

12. Lack of provision for taking books to home by teachers (52%).

**Laboratory**

1. Lack of language laboratory (100%).

2. Lack of adequate room size for laboratory (78%).

3. Lack of fully qualified laboratory assistant (62%).

4. No separate laboratory assistant (60%)

5. Improper maintenance of laboratory (60%).

6. Inadequacy of work shelves and work tables in the laboratory (54%).

7. Inadequacy of laboratory equipments for each science subjects (52%).

8. Inadequate quantity of consumables in the laboratory (52%)

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (88%).

2. Lack of opportunity for providing real experience to students (84%)

3. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public examination (76%).

4. Lack of clear cut directions from the authority for executing projects, seminars etc. (70%).

5. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (70%).

6. Overloaded curriculum (56%).

**Building & Furniture**

1. Lack of additional room for language classes (96%).

2. Lack of classrooms of prescribed norms (78%)

3. Classrooms without roofs impervious to heat (70%).

4. Classrooms without proper ventilation (64%)

5. Classrooms without proper electric connection (58%).

6. Lack of adequate number of classrooms (54%)

7. Lack of sufficient furniture in classroom for teachers (52%)

8. Lack of adequate number of benches and desks in classrooms for students (50%)

**Physical Education**

1. Lack of separate physical education teachers (92%)

2. Lack of sufficient sports materials like volleyball, football etc. (80%).

3. Lack of sufficient number of periods for physical education (72%).

4. Non-availability of quality playground (58%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (86%).

3. Lack of necessary appliances for teaching crafts (62%)

3. Lack of adequate number of study aids (60%).

**Computer**

1. Computers without internet connection (74%)

2. Lack of well equipped computer room (70%)

**V. Major Instructional Problems of Higher Secondary School Teachers Based on Area of Specialisation**

***a) Arts teachers***

For the teachers handling arts subjects in higher secondary schools there are 33 major instructional problems. Out of these 11 problems are related with library (33.3%), 7 problems are related with buildings and furniture (21.2%), 5 problems are related with academic matters (15.3%), 4 problems are related with audio visual aids (12.1%), 3 problems are related with physical education (9.1%), 2 problems are related with computer (6%), 1 problem is related with laboratory (3%). There is no major instructional problem related with school location. Area-wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (98.86%)

2. Lack of separate reading room (95.45%)

3. Improper ventilation and lighting in library (89.77%)

4. Inadequate room size for library (89.76%)

5. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (87.50%).

6. Lack of separate seating arrangements for teachers (85.22%).

7. Lack of purchase of books, journals etc. demanded by teachers (82.95%).

8. Non-availability of separate library for higher secondary section (78.40%).

9. Inadequate number of general books (75.13%).

10. Lack of provision for taking books to home by students (64.77%).

11. Inadequacy of handbooks and source books of concerned subjects (52.27%).

**Laboratory**

1. Lack of language laboratory (100%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (90.90%).

2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (79.54%)

3. Lack of opportunity for providing real experience to students (79.54%)

4. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (76.13%).

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (73.86%).

**Building & Furniture**

1. Lack of additional room for language classes (93.18%).

2. Lack of classrooms of prescribed norms (72.72%)

3. Classrooms without proper electric connection (62.50%)

4. Classrooms without roofs impervious to heat (60.22%)

5. Classrooms without proper ventilation (56.81%)

6. Lack of adequate number of benches and desks in classroom for students (51.27%).

7. Lack of sufficient furniture in classroom for teachers (50%).

**Physical Education**

1. Lack of separate physical education teacher (93.18%)

2. Lack of sufficient sports materials like volleyball, football etc. (71.59%).

3. Lack of sufficient number of periods for physical education (66.90%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector etc. (86.50%).

2. Lack of adequate number of study aids (65.90%).

3. Lack of necessary appliances for teaching crafts (61.50%)

4. Lack of quality chalk board (50%).

**Computer**

1. Computer without internet connection (68.18%).

2. Lack of well equipped computer room (57.95%)

***b) Commerce teachers***

For the teachers handling commerce subjects in higher secondary schools there are 33 major instructional problems. Out of these 12 problems are related with library (36.4%), 6 problems each are related with building and furniture and academic matters (18.2%), 4 problems are related with physical education (12.1%), 3 problems are related with audio visual aids (9.1%), 2 problems are related with computer (6%). There is no major instructional problem related with school location and laboratory. Area-wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (97.28%)

2. Lack of separate reading room (96.22%)

3. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (94.44%).

4. Inadequate room size for library (92.66%)

5. Lack of separate seating arrangements for teachers (86.11%).

6. Inadequate number of general books (83.35%).

7. Improper ventilation and lighting in library (83.33%)

8. Lack of purchase of books, journals etc. demanded by teachers (80.59%).

9. Lack of provision for taking books to home by students (80.58%)

10. Non-availability of separate library for higher secondary section (75%).

11. Lack of provision for taking books to home by teachers (61.11%)

12. Inadequacy of handbooks and source books of concerned subjects (55.68%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (97.22%).

2. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (91.66%)

3. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (86.11%).

4. Lack of opportunity for providing real experience to students (83.33%)

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (77.77%).

6. Overloaded curriculum (55.55%)

**Building & Furniture**

1. Lack of additional room for language classes (88.88%).

2. Lack of classrooms of prescribed norms (77.77%)

3. Classrooms without roofs impervious to heat (75%)

4. Classrooms without proper electric connection (63.88%)

5. Classrooms without proper ventilation (59.99%)

6. Lack of adequate number of benches and desks in classroom for students (50%).

**Physical Education**

1. Lack of separate physical education teachers (90.66%)

2. Lack of sufficient number of periods for physical education (80.55%).

3. Lack of sufficient sports materials like volleyball, football etc. (69.44%).

4. Non-availability of quality playground (55.59%)

**Audio Visual Aids**

1. Lack of adequate number of study aids (72.22%).

2. Lack of necessary appliances for teaching crafts (61.11%)

3. Non-availability of necessary audio visual aids such as OHP, slide projector etc. (55.55%).

**Computer**

1. Computer without Internet Connection (88.88%).

2. Lack of well equipped computer room (80.55%)

***c) Science teachers***

For the teachers handling science subjects in higher secondary schools, there are 35 major instructional problems. Out of these 11 problems are related with library (31.4%), 6 problems each are related with academic matters and laboratory (17.1%), 5 problems are related with building & furniture (14.3%), 3 problems each are related with physical education and audio visual aids (8.6%) and 1 problems is related with computer (2.9%). There is no major instructional problem related with school location. Area wise distribution of these major instructional problems according to their seriousness are listed below.

**Library**

1. Lack of separate librarian (100%)

2. Lack of separate reading room (94.25%)

3. Improper ventilation and lighting in library (93.10%)

4. Inadequate room size for library (88.50%)

5. Lack of sufficient number of reference books, journals, newspapers, magazines for concerned subjects (88.50%).

6. Inadequate number of general books (86.20%).

7. Lack of separate seating arrangements for teachers (86.20%).

8. Lack of purchase of books, journals etc. demanded by teachers (83.90%).

9. Non-availability of separate library for higher secondary section (75.86%).

10. Lack of provision for taking books to home by students (64.36%)

11. Inadequacy of handbooks and source books of concerned subjects (51.72%).

**Laboratory**

1. Lack of language laboratory (100%).

2. Lack of adequate room size for laboratory (68.96%).

3. Improper maintenance of laboratory (59.77%).

4. Inadequacy of workshelves and worktables in laboratory (56.32%).

5. Lack of fully qualified laboratory assistant (52.87%).

6. Inadequate quantity of consumables in laboratory (51.72%).

**Academic Matters**

1. Lack of provision for teachers to participate in refresher programmes (93.10%).

2. Lazy nature of students in the plus one classes due to the exemption of plus one marks from the final public examination (80.45%).

3. Lack of opportunity for providing real experience to students (80.45%)

4. Less competitive nature of students in plus one classes due to the exemption of plus one marks from the final public exam (78.16%)

5. Lack of clear cut directions from the authority for executing projects, seminars etc. (72.41%).

6. Overloaded curriculum (67.81%)

**Building & Furniture**

1. Lack of additional room for language classes (96.54%).

2. Lack of classrooms of prescribed norms (70.11%)

3. Classrooms without roofs impervious to heat (70.11%)

4. Classrooms without proper ventilation (64.36%)

5. Classrooms without proper electric connection (63.21%)

**Physical Education**

1. Lack of separate physical education teacher (88.50%)

2. Lack of sufficient number of periods for physical education (77.01%).

3. Lack of sufficient sports materials like volleyball, football etc. (75.86%).

**Audio Visual Aids**

1. Non-availability of necessary audio visual aids such as OHP, slide projector (87.35%).

2. Lack of adequate number of study aids (65.51%).

3. Lack of necessary appliances for teaching crafts (57.47%)

**Computer**

1. Computer without internet connection (55.17%).

**VI. Disparities in the Major Instructional Problems of Higher Secondary School Teachers Based on Locale of the School**

When the major instructional problems of teachers were compared based on locale of the school, it was found that there are 34 major instructional problems common to teachers of rural and urban higher secondary schools. Where as 3 major problems occurring only among teachers of rural schools and 4 major problems occurring only among teachers of urban schools. In the 3 problems which are occurring only among rural teachers, 1 problem is related with library and 2 problems are related with laboratory. These problems are listed below according to their order and seriousness.

**Library**

1. Inadequacy of hand books and source books of concerned subjects (59.52%).

**Laboratory**

1. Inadequate quantity of consumables in laboratory (54.16%).

2. Improper maintenance of laboratory (63.49%).

 In the 4 major problems which are occurring only to teachers of urban schools, 2 problems are related with building and furniture and 1 problem each are related with school location and physical education.

 These problems are listed below according to their order and seriousness.

**Building & Furniture**

1. Lack of adequate number of classrooms (52.94%).

2. Lack of adequate number of benches and desks in classroom for students (50.58%).

**School location**

1. School is in congested area (55.29%).

**Physical Education**

1. Non-availability of quality playground

**VII. Disparities in the Major Instructional Problems of Higher Secondary School Teachers Based on Type of School Management**

 When the major instructional problems of teachers were compared based on type of school management, it was found that 30 major instructional problems are common to teachers of both government and private higher secondary schools. Where as 18 major problems occurring only to teachers of government schools and there is no major instructional problem occurring specifically to teachers of private schools. In the 18 problems which are occurring only to teachers working government schools, 8 problems are related with laboratory, 4 problems are related with building and furniture, 2 problems each are related with audio visual aids and library, 1 problem each are related with academic matters and physical education.

 These problems are listed below according to their order and seriousness.

**Laboratory**

1. No separate laboratory assistant (100%).

2. Lack of fully qualified laboratory assistant (100%).

3. Improper maintenance of laboratory (90.11%).

4. Inadequacy of work shelves and worktables in laboratory (85.71%).

5. Inadequate quantity of consumables in laboratory (81.42%).

6. Inadequacy of laboratory equipments for each science subjects (81.32%).

7. Laboratory rooms without proper seating arrangements for teachers and students (80.22%).

8. Lack of separate room for laboratory for each science subjects (58.24%).

**Building and Furniture**

1. Lack of adequate number of benches and desks in classroom for students (83.51%).

2. Lack of sufficient furniture in classroom for teachers (73.62%).

3. Lack of adequate number of classrooms (67.03%).

4. Lack of building of pucca construction (63.73%).

**Audio visual Aids**

1. Lack of necessary appliances for teaching crafts (78.02%).

2. Lack of quality chalk board (66.03%)

**Library**

1. Inadequacy of hand books and source books of concerned subjects (69.23%).

2. Lack of provision for taking books to home by teachers (54.94%).

**Academic Matters**

1. Lack of extra remuneration for remedial coaching classes (50.54%).

**Physical Education**

1. Non-availability of quality play ground (50.55%).

 There is no major instructional problem specific to teachers working in private higher secondary schools.

**VIII. Disparities in the Major Instructional Problems of Higher Secondary School Teachers Based on Teaching Experience**

 When the major instructional problems of teachers were compared based on teaching experience, it was found that 30 major instructional problems are common to guest teachers, teachers with below ten years experience and teachers with more than ten years experience. Where as 9 problems occurring only to guest teachers, 1 problem occurring only to teachers with more than ten years experience and there is no major instructional problem occurring specifically to teachers with below ten years experience. In the 9 problems occurring specifically to guest teachers, 3 problems are related with academic matters, 2 problems each are related with building and furniture and laboratory, 1 problem each are related with computer and audio visual aids. These problems are listed below according to their order and seriousness.

**Academic Matters**

1. Lack of extra remuneration for remedial coaching classes (84.60%).

2. Difficulty due to change in medium of instruction into english (71.80%).

3. Difficulty in preparation due to lack of sufficient holidays in a week (69.23%).

**Building and Furniture**

1. Lack of building of pucca construction (87.19%).

2. Lack of separate building for higher secondary section (56.41%).

**Laboratory**

1. Lack of separate room for laboratory for each science subjects (76.92%).

2. Laboratory rooms without proper seating arrangements for teachers and students (87.17%).

**Computer**

1. Lack of separate computer room for higher secondary section (56.41%).

**Audio Visual Aids**

1. Lack of quality chalkboard (69.23%).

 The problem occurring only to teachers with more than ten years experience is related with physical education. The problem is listed below.

**Physical Education**

1. Non-availability of quality play ground (58%).

 There is no major instructional problem specific to teachers with below ten years experience.

**IX. Disparities in the Major Instructional Problem of Higher Secondary School Teachers Based on Area of Specialisation**

 When the major instructional problems of teachers were compared based on area of specialisation, it was found that 28 major instructional problems are common to arts, commerce and science teachers. Where as 2 problems occurring only to arts teachers, 2 problems occurring only to commerce teachers, and 5 problems occurring only to science teachers. In the 2 problems occurring specifically to arts teachers, 1 problem each are related with audio visual aids and building and furniture. These problems are listed below according to their order and seriousness.

**Audio visual Aids**

1. Lack of quality chalk board (50%).

**Building and Furniture**

1. Lack of sufficient furniture in classroom for teachers (50%).

 In the 2 problems occurring specifically to commerce teachers, 1 problem is related with library and 1 problem is related with physical education. These problems are listed below according to their order and seriousness.

**Library**

1. Lack of provision for taking books to home by teachers (61.11%).

**Physical Education**

1. Non-availability of quality playground (55.59%).

 The problems occurring specifically to science teachers is related with laboratory.

**Laboratory**

1. Inadequacy of work shelves and work tables in the laboratory (56.32%).

2. Lack of adequate room size for laboratory (68.96%).

3. Lack of fully qualified laboratory assistant (52.87%).

4. Improper maintenance of laboratory (59.77%).

5. Inadequate quality of consumables in laboratory (51.72%).

**TENABILITY OF THE HYPOTHESIS**

 The tenability of the hypothesis set for the study was examined in the light of the findings. The hypothesis states that there will be considerable difference in the major instructional problems faced by higher secondary school teachers based on,

 (i) Locale of the School

 (ii) Type of School Management

 (iii) Teaching Experience

 (iv) Area of Specialisation

 The findings of the study revealed that the hypothesis is not fully substantiated.

**EDUCATIONAL IMPLICATIONS**

 The two fold objectives of the present study were to find out the major instructional problems faced by higher secondary school teachers based on locale of the school, type of school management, teaching experience and area of specialisation and to examine whether there is considerable difference in the major instructional problems based on subsamples. The investigator took this study with the hope that the instructional problems faced by higher secondary school teachers can be identified and that there by the knowledge of these instructional problems will help the teachers, government and school authorities to give proper attention for improving it and thereby leading to the betterment of quality of education.

 Based on the findings of the study the investigator suggests following remedies to reduce the intensity of instructional problems faced by higher secondary school teachers.

1. A separate library meant for higher secondary section is to be established. Separate reading room for teachers, sufficient number of journals, news papers, magazines are to be provided in the library. Also steps are to be taken for the appointment of separate librarian for higher secondary section.

2. With the view to improve the standard of english language among teachers and students, a language laboratory is to be set up in schools.

3. Necessary laboratory equipments, specimens, consumables, work shelves, worktables is to be ensured in the laboratory. In addition, a separate laboratory assistant may be appointed to enable the teachers to provide more attention to students in the laboratory.

4. For the final evaluation of the performance of students in higher secondary course, the performance of the students in the plus one class also is to be assessed.

5. Curriculum is to be made more interesting and activity oriented for effective transaction of subject matter by the teachers.

6. Proper guidelines is to be given to the teachers regarding the projects to be conducted in various subjects among students.

7. Faculty improvement programmes are to be frequently organized for improving the quality of teachers.

8. Availability of sufficient number of computers with internet connection is to be ensured to help teachers to get and provide up-to-date information in their respective subjects.

9. Audio visual aids like over head projector, slide projector, television, globes, maps etc. are to be made available in the school

10. School is to be situated in a congenial and peaceful environment with the proper infrastructure.

11. Physical education is to be given stress with sufficient number of periods in the time table, appointment of physical education teachers and availability of sports equipments in the school.

**SUGGESTIONS FOR FURTHER RESEARCH**

 The findings of the study helped the investigator to suggest the following areas for further research.

1. A study on instructional problems faced by the teachers working in different stages of education can be done.

2. A detailed study on different areas of instructional problems faced by higher secondary school teachers can be conducted.

3. A study of different teaching strategies for the effective transaction of curriculum can be conducted.

APPENDIX I

FAROOK TRAINING COLLEGE, CALICUT

INSTRUCTIONAL PROBLEM INVENTORY FOR HIGHER SECONDARY SCHOOL TEACHERS (2005)

**Dr. MUMTHAS. N.S. JIJI JOSE THACHIL**

# Sr. Lecturer in Education M.Ed. Student

# Farook Training College Farook Training College

Name ……………… Male/Female ………

Age ……………….. Educational Qualification …………….

Teaching Experience ……….. years Nature of Job: Guest/Permanent

Subject of specialization ……………………

Name of the School …………………………

Urban/Rural ……………… Govt./ Aided ………..

## INSTRUCTIONS

 This inventory is meant for identifying the instructional problems faced by higher secondary school teachers due to the lack of proper infrastructural facilities, lack of clear cut examination policy etc. Read each item carefully and if a particular item is a **problem for you** to make your instruction very effective in your school, please put a tick (✓) mark in the column against that particular item; otherwise ignore it.

**I.** 1. School is in congested area 🞏

 2. School is in noisy area 🞏

**II.** 3. Lack of adequate number of classroom 🞏

 4. Lack of additional room for language classes 🞏

 5. Lack of classrooms of prescribed norms 🞏

 6. Lack of separate building for higher secondary section 🞏

 7. Lack of building of pucca construction 🞏

 8. Improper partitioning of classrooms 🞏

 9. Classrooms without proper electric connection 🞏

 10. Classrooms without proper ventilation 🞏

 11. Classrooms without roofs impervious to heat 🞏

 12. Non availability of the separate staff room for higher

 secondary section 🞏

 13. Lack of adequate number of benches and

 desks in classrooms for students 🞏

 14. Lack of sufficient furniture in classroom for teachers 🞏

**III.**15. Non-availability of separate library for higher secondary

 section 🞏

 16. Lack of sufficient number of reference books, journals,

 newspapers, magazines, etc. for concerned subjects 🞏

 17. Inadequate number of general books 🞏

 18. Inadequacy of hand books and source books of

 concerned subjects 🞏

 19. Inadequate room size for library 🞏

 20. Improper ventilation and lighting in library 🞏

 21. Lack of separate reading room 🞏

 22. Lack of separate seating arrangements for teachers 🞏

 23. Lack of separate librarian 🞏

 24. Lack of purchase of books, journals etc. demanded

 by teachers 🞏

 25. Lack of provision for taking books to home by teachers 🞏

 26. Lack of provision for taking books to home by students 🞏

**IV.**27. Lack of separate room for laboratory for each

 science subjects 🞏

 28. Lack of adequate room size for laboratory 🞏

 29. Inadequacy of laboratory equipments for each science

 subjects 🞏

 30. Inadequate quantity of consumables in laboratory 🞏

 31. Laboratory rooms without proper seating arrangements

 for teachers and students 🞏

 32. Inadequacy of work shelves and work tables in the

 laboratory 🞏

 33. No separate laboratory assistant 🞏

 34. Lack of fully qualified laboratory assistant 🞏

 35. Improper maintenance of laboratory 🞏

 36. Lack of language laboratory 🞏

**V**. 37. Overloaded curriculum 🞏

 38. Less competitive nature of students in plus one classes

 due to the exemption of plusone marks from the final

 public exam 🞏

 39. Lazy nature of students in the plus one classes due to the

 exemption of plus one marks from the final

 public examination 🞏

 40. Lack of clear cut directions from the authority for

 executing projects, seminars etc. 🞏

 41. Lack of provision for teachers to participate in refresher

 programmes 🞏

 42. Lack of opportunity for providing real experience

 to students 🞏

 43. Lack of extra remuneration for remedial coaching classes 🞏

 44. Difficulty due to change in medium of instruction

 into english 🞏

 45. Difficulty in preparation due to lack of sufficient

 holidays in a week 🞏

**VI**.46. Lack of separate computer room for higher secondary

 Section 🞏

 47. Lack of well equipped computer room 🞏

 48. Computers without internet connection 🞏

 49. Lack of fully qualified computer teacher 🞏

 50. Lack of special training for teachers those who are

 handling computer 🞏

**VII**.51. Lack of sufficient number of periods for
 physical education 🞏

 52. Lack of sufficient sports materials like volleyball,

 football etc. 🞏

 53. Non-availability of quality playground 🞏

 54. Lack of separate physical education teacher 🞏

**VIII.**  55. Lack of necessary appliances for teaching crafts 🞏

 56. Lack of quality chalk board 🞏

 57. Lack of adequate number of study aids 🞏

 58. Non-availability of necessary audio visual aids such as

 OHP 🞏

 Slide Projector 🞏

 Radio 🞏

 TV 🞏

### APPENDIX II

### List of Higher Secondary Schools Selected for Data Collection

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl.No. | Name of Institution | No. of Teachers | Sl.No. | Name of Institution | No. of teachers |
| 1. | G.H.S.S. Kuttikatoor | 4 | 16 | G.H.S.S. Kallachi | 3 |
| 2 | G.H.S.S. East Hill | 3 | 17 | G.V.H.S.S. for Girls, Nadakkavu | 4 |
| 3 | G.H.S.S. Beypore | 5 | 18 | G. Model H.S.S. Calicut | 9 |
| 4 | G.H.S.S. Balusseri | 4 | 19 | G.H.S.S. Mavoor | 8 |
| 5 | Govt. Azchavattom H.S.S. | 4 | 20 | G.H.S.S. Kokkallur | 3 |
| 6 | G.H.S.S. Valayam, Vatakara | 4 | 21 | A.K.K. R. Girls H.S.S. Chelannur | 6 |
| 7 | G.V.H.S.S R.E.C. Chathamangalam | 5 | 22 | Nochat H.S.S. Nochat | 4 |
| 8 | Govt. Medical College Campus H.S.S. | 3 | 23 | S.N. Trust H.S.S. Chelannur | 6 |
| 9 | Govt. Feroke Ganapath V.H.S.S. | 6 | 24 | Providence G.H.S.S. Calicut | 1 |
| 10 | Govt. Achutan Girls H.S.S. | 4 | 25 | Nadavannur H.S.S. Vakayad | 5 |
| 11 | G.V.H.S.S. Cheruvanoor | 4 | 26 | Pavandoor H.S.S. Pavandoor | 6 |
| 12 | G.H.S.S. Thamarasseri | 5 | 27 | M.M.V.H.S.S. Calicut | 6 |
| 13 | G.G.G.H.S.S. Chalappuram | 4 | 28 | M.C.C.H.S.S. Calicut | 4 |
| 14 | G.H.S.S. Kuttiyadi | 5 | 29 | Farook H.S.S. Farook College | 8 |
| 15 | Govt. Kallai Ganpath H.S.S. | 4 | 30 | J.D. T. Islam H.S.S. Calicut | 4 |
|  |  |  |  |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl.No. | Name of Institution | No. of Teachers | Sl.No. | Name of Institution | No. of teachers |
| 31 | St. Josephs Boys H.S.S., Calicut | 9 | 38 | St. George H.S.S., Kolathuvayal | 4 |
| 32 | Sri Ramakrishna Mission H.S.S. | 6 | 39 | Nanmidna H.S.S., Nanminda | 4 |
| 33 | B.E.M. Girls H.S.S., Calicut | 4 | 40 | U.H.H.S.S., Chaliyam | 5 |
| 34 | Z.H.S.S., Calicut | 5 | 41 | National H.S.S., Vattoli  | 4 |
| 35 | Markaz H.S.S. for Boys, Karanthur | 7 | 42 | Kunnamangalam H.S.S.  | 7 |
| 36 | Scared Heart H.S.S., Thiruvambady | 3 | 43 | Himayathul Islam H.S.S. | 6 |
| 37 | Calicut Girls H.S.S., Calicut  | 3 | 44 | Perambra H.S.S., Perambra | 3 |

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